

Ka Leo O Nā Keiki

**THE 2003 HAWAII STUDENT ALCOHOL,
TOBACCO, AND OTHER DRUG USE STUDY (1987-2003)**

**HAWAII ADOLESCENT PREVENTION AND
TREATMENT NEEDS ASSESSMENT**

Executive Summary, 2003

by

Renee Storm Pearson, Ph.D.

The University of Hawaii at Manoa

Hawaii Department of Health
Alcohol and Drug Abuse Division
601 Kamokila Boulevard, Room 360
Kapolei, Hawaii 96707

2004

TABLE OF CONTENTS

Section I.	Lifetime Prevalence and Trends	2
Section II.	Monthly and Daily Prevalence and Trends	8
Section III.	Treatment Needs	13
Section IV.	Prevention Needs	19
Section V.	Conclusion and Recommendations	26
Appendix A.	Prevalence Tables	29
Appendix B.	Treatment Needs Tables	42
Appendix C.	Factors Related to Substance Use Tables	45
Appendix D.	Risk and Protective Factors Tables	57
References	66

Results presented here are excerpted from the comprehensive volume, *Ka Leo O Nā Keiki ~ The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study (1987-2003); Hawaii Adolescent Prevention and Treatment Needs Assessment* (Pearson, 2004). The comprehensive report is available throughout the Hawaii State Public Library System; at Hamilton and Sinclair Libraries, University of Hawaii at Manoa; and at each of the District School Offices. The study was funded by the Hawaii Department of Health, Alcohol and Drug Abuse Division, with federal funds from the Substance Abuse prevention and Treatment Block Grant.

Recommended Citation

Pearson, R. S. (2004). *Ka Leo O Nā Keiki ~ The 2003 Hawaii student alcohol, tobacco, and other drug use study (1987-2003); Hawaii adolescent prevention and treatment needs assessment: Executive summary, 2003*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.

INTRODUCTION

In the Fall of 2003, the State of Hawaii Department of Health, Alcohol and Drug Abuse Division (ADAD), and Dr. Renee Pearson from the University of Hawaii collaborated in a study designed to assess prevalence and trends in substance use, treatment needs, and risk and protective factors that predict substance use and abuse among Hawaii students in grades 6 through 12. The results presented in this report are based on responses from approximately 30,000 students in 181 public schools, 41 private schools, and 7 charter schools. Data from the previous *Hawaii Student Alcohol and Other Drug Use Studies* (Klingler & Miller, 1997, 1999; Klingler, 2001; Pearson, 2003; Woo, Yen, & Pollard, 1994) are used to assess trend results. Data from the national *2003 Monitoring the Future Study* (Johnston, O'Malley, Bachman, & Schulenberg, 2004) are used to make nationwide comparisons. As in previous years, the current report focuses on students in grades 6, 8, 10, and 12. Results for all grades surveyed are made available in separate profile reports on the ADAD web site.

The executive summary highlights the key findings from the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study (1987-2003): Adolescent Prevention and Treatment Needs Assessment* (Pearson, 2004). Refer to the comprehensive volume for specific details on the findings discussed in this report.

Section I highlights lifetime prevalence and trend data. Section II addresses monthly and daily prevalence and trend data. Prevalence refers to the percentage of the sample reporting use of a given substance on one or more occasions in the given period. Lifetime prevalence refers to use of a substance at least once in a student's lifetime, monthly prevalence refers to use of a substance at least once in the past 30 days, and daily prevalence refers to use of a substance on 20 or more occasions in the past 30 days. Eleven separate classes of drugs are distinguished for this report: Marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, tranquilizers or sedatives, hallucinogens, steroids, "club drugs" (ecstasy/MDMA, GHB, Rohypnol, and ketamine), alcohol, and tobacco. Use of any illicit drug includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, tranquilizers or sedatives, hallucinogens, steroids, ecstasy, GHB, Rohypnol, or ketamine. Use of alcohol refers to the use of wine, beer, or hard liquor. Use of tobacco refers to the use of cigarettes or smokeless tobacco. Throughout this report, "substances" refer to alcohol, tobacco, and illicit drugs. Appendix A provides four prevalence tables. The first three tables provide lifetime, monthly, and daily prevalence trends from 1987 to 2003. Table 4 provides 2003 nationwide comparison data (Johnston et al., 2004).

Section III summarizes adolescent treatment needs in the State of Hawaii. Treatment needs are determined by using the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R) criteria, which emphasize negative social and interpersonal consequences resulting from using drugs. Treatment needs are assessed for six classes of substances: alcohol, marijuana, stimulants, depressants and downers, hallucinogens, and club drugs. Appendix B provides treatment needs tables. Table 5 summarizes statewide treatment needs in grades 6, 8, 10, and 12 for each substance classification (alcohol, marijuana, stimulants, depressants, hallucinogens, and club drugs). Table 6 provides estimated statewide, county-level, district-level, and school type (i.e., public versus private) alcohol and drug abuse treatment needs for students in grades 6 through 12.

Section IV summarizes adolescent prevention needs in the State of Hawaii. First, substance use onset, attitudes and beliefs about drugs, and the social environment are discussed. Next, the comprehensive risk and protective factor framework is explained, and key findings related to community profiles are highlighted. Appendix C provides a number of tables that focus on factors related to substance use and Appendix D provides a summary of critical risk and protective factors that should be the focus of prevention efforts in various communities and among different subgroups.

SECTION I – LIFETIME PREVALENCE AND TRENDS

At the turn of the century, survey results from the *Hawaii Alcohol, Tobacco, and Other Drug Use Study* began to display a more positive picture of adolescent substance use in the State of Hawaii than was seen in prior survey years. The current survey effort shows a continual decline in students' choices to try illicit drugs, alcohol, and tobacco. Lifetime prevalence reports of any illicit drug use (e.g., use of any illicit drug at least once in a person's lifetime), alcohol use, and tobacco use are currently at, or near, record lows.

Illicit drug use steadily increased in Hawaii from 1991 to 1996 at all grade levels. This trend in illicit drug use continued in 1998 for students in the upper grades, but a decrease in prevalence rates was noted in grade 8, and a stabilization pattern was observed in grade 6. In 2000, lifetime prevalence of any illicit drug use dropped at all grade levels. Lifetime prevalence of any illicit drug use continued on a downward trajectory for grade 8. For all other grades, lifetime prevalence of any illicit drug use rose slightly in 2002, but then decreased again across all grade levels in 2003. In grades 6 and 8, prevalence reports of any illicit drug use has reached record lows; in grades 10 and 12, prevalence reports of any illicit drug use are below those reported in 1996, but remain higher than those noted in 1991. In regards to specific drugs, lifetime prevalence reports either decreased or stabilized in 2003 for virtually every illicit drug. The only drug showing clear evidence of an increase in 2003 was inhalant use among 12th graders. Substantial decreases in lifetime prevalence rates occurred for marijuana, methamphetamine, hallucinogens, and ecstasy/MDMA. Nationwide, overall illicit drug use has been declining for several years among 8th-grade students and had been holding steady among older students until 2002; in 2002, there was a significant decline in overall illicit drug use among older students and the trend continued in 2003. In 2003, the most notable decreases nationwide were in marijuana and ecstasy use. The only observed increase nationwide was among 8th-grade students use of inhalants.

Alcohol use by adolescents in Hawaii, as well as nationwide, had remained fairly stable and high over the years. However, decreases in lifetime prevalence reports of alcohol use began to occur in 2000 for Hawaii students and in 2001 for students nationwide. Lifetime prevalence reports of alcohol use have continued to decline over the years in Hawaii, as well as nationwide. Lifetime prevalence reports of cigarette use among adolescents reached all-time highs in 1996, both in Hawaii and nationwide. Beginning in 1998, lifetime prevalence reports of cigarette use began an encouraging decline in Hawaii and have continued on that course through 2003. Hawaii lifetime prevalence reports of cigarette use are currently lower than they were in 1987. Although Hawaii substance use trends often reflect nationwide trends, Hawaii lifetime prevalence reports for alcohol, tobacco, and illicit drugs have been and currently are much lower than nationwide reports.

Refer to Table 1 for lifetime prevalence data and Table 4 for nationwide comparison data (see Appendix A). Figure 1 illustrates trends in lifetime illicit drug, alcohol, and cigarette use since 1987. Figures 2 and 3 display the nationwide comparison data for lifetime illicit drug, alcohol, and tobacco use.

- Lifetime use of *any illicit drug* decreased from 1987 to 1991, steadily increased in 1993 and 1996, continued to increase in 1998 in the upper grades, and finally decreased across all four grade levels in 2000. In 2002, the proportion of students reporting the use of any illicit drug in their lifetimes continued to decline only in grade 8. The downward trajectory picked up again in 2003 across all grade levels. Student reports of any illicit drug use in their lifetimes are now at record lows in grades 6 and 8, and near record lows in grade 10. In 2003, lifetime prevalence reports of any illicit drug use, including inhalants, in grades 6, 8, 10, and 12 are 8%, 19%, 35%, and 47%, respectively.

FIGURE 1
Trends in Lifetime Prevalence of Any Illicit Drug, Alcohol, and Cigarette Use
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

Figure 1a: **Sixth Grade** Lifetime Prevalence

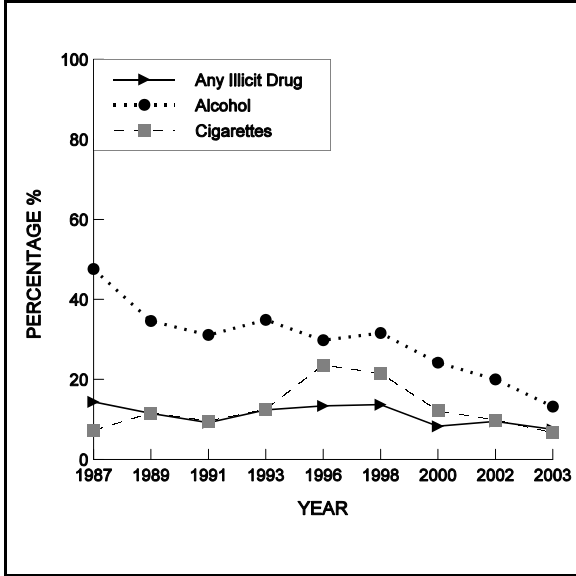


Figure 1b: **Eighth Grade** Lifetime Prevalence

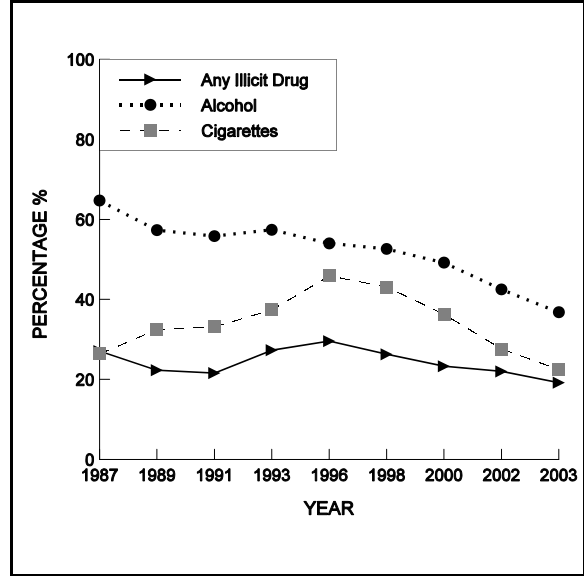


Figure 1c: **Tenth Grade** Lifetime Prevalence

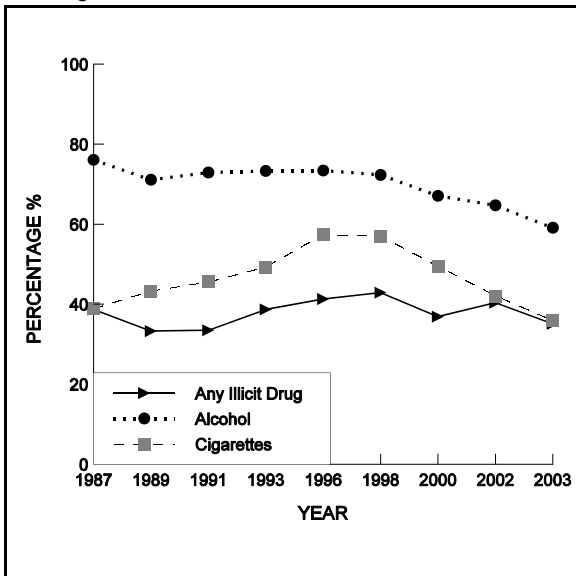
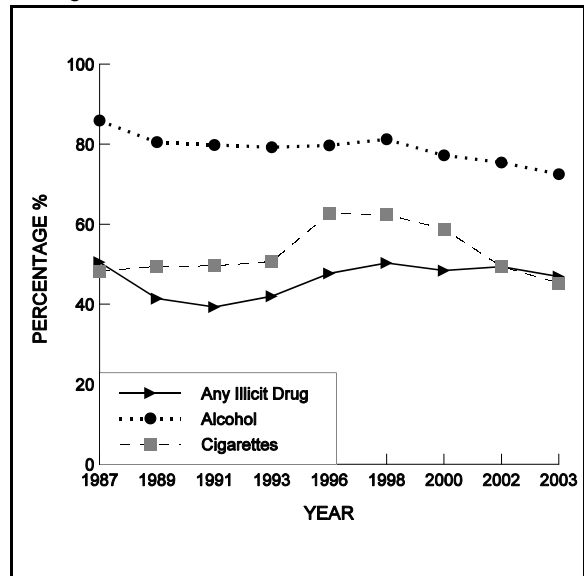


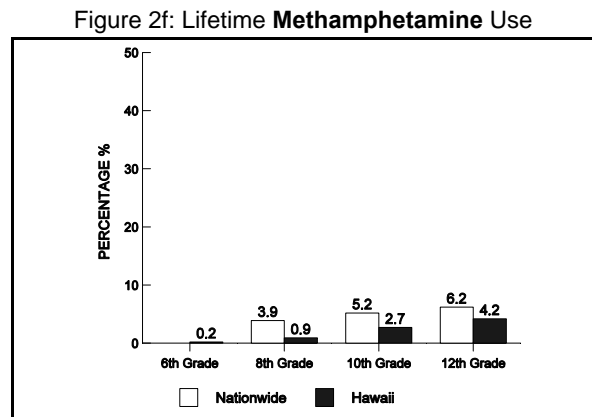
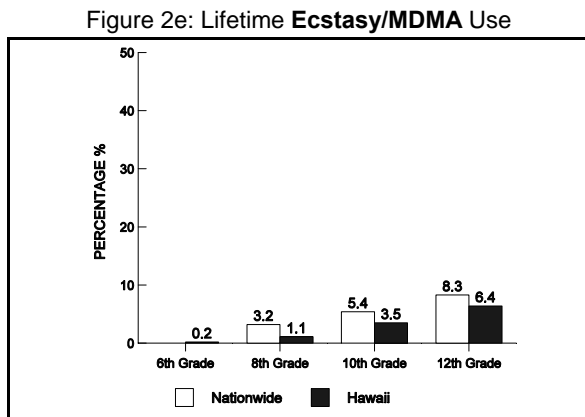
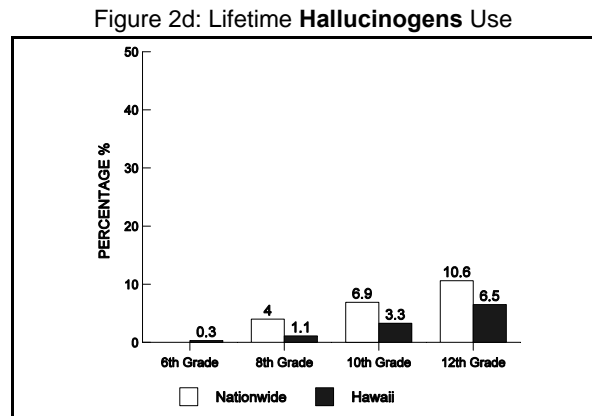
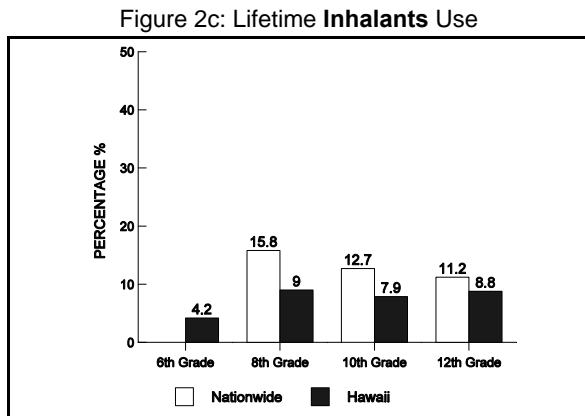
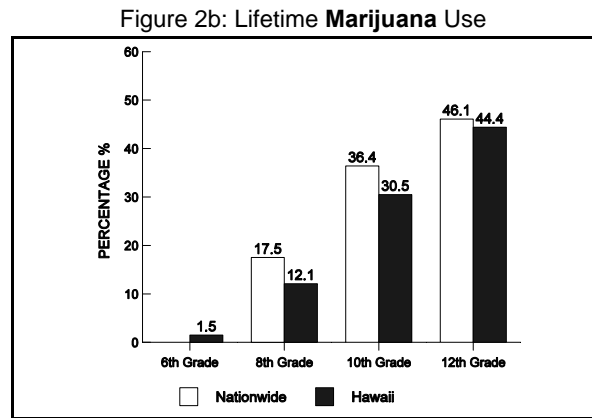
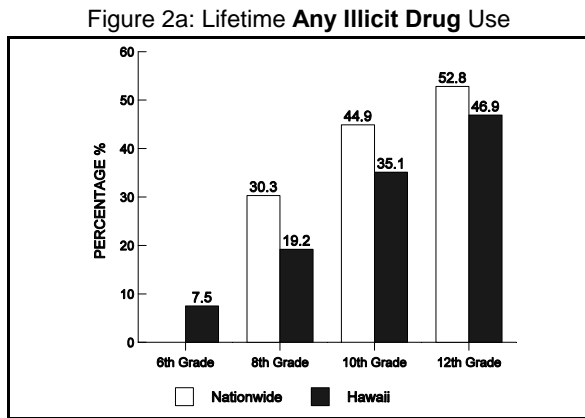
Figure 1d: **Twelfth Grade** Lifetime Prevalence



FINDINGS: Lifetime prevalence of any illicit drug use (e.g., use of an illicit drug at least once in a person’s lifetime) steadily increased in 1993 and 1996, continued to increase in 1998 in the upper grades, and finally decreased across all four grade levels in 2000. Lifetime prevalence of any illicit drug use continued on a downward trajectory for grade 8 in 2002; for other grades, lifetime prevalence of any illicit drug use rose slightly in 2002, but then decreased again across all grade levels in 2003. Lifetime prevalence of any alcohol use remained relatively unchanged from 1989 to 1998 for students in the upper grades. A substantial decrease occurred in 2000 across all grades and continued to decline over the past few years. Cigarette use among adolescents was at an all-time high in 1996. An encouraging decline in lifetime prevalence of cigarette use started in 1998 and has continued through 2003. Lifetime cigarette prevalence reports in 2003 have reached record lows.

- Lifetime prevalence reports of *marijuana* use, the most widely used of the illicit drugs, steadily increased from 1991 to 1998, began to drop in the lower grades in 1998, and declined across all grades in 2000. In 2002, lifetime marijuana prevalence reports held fairly steady for all grades, except the 10th grade, where marijuana use rose slightly. In 2003, lifetime marijuana prevalence reports dropped in all grades. In 2003, 2% of the 6th graders, 12% of the 8th graders, 31% of the 10th graders, and 44% of the 12th graders reported trying marijuana at some point in their lifetimes. Nationwide, lifetime marijuana prevalence reports are also down in 2003. Prevalence reports in Hawaii for marijuana use are lower than nationwide reports, where 18% of the 8th graders, 36% of the 10th graders, and 46% of the 12th graders reported having tried marijuana.
- *Inhalants* are the most popular drugs for 6th graders, with 4% of these students reporting that they have tried inhalants to get high at some point in their lifetimes. Prevalence rates for inhalant use decreased sharply from 1998 to 2000 in all grades. In 2002, inhalant use remained steady in grade 6, dropped modestly in grade 8, and increased in grades 10 and 12. In 2003, inhalant use increased again in grade 12, but decreased slightly or stabilized in other grades. Nationwide, inhalant use rose slightly in grade 8, but continued to decline in grades 10 and 12. Hawaii lifetime prevalence reports in 2003 for inhalant use in grades 8, 10, and 12 (9%, 8%, and 9%, respectively) remain much lower than nationwide reports in the same grades (16%, 13%, and 11%).
- Over the years, *hallucinogens* have been the second most popular illicit drug among older students. In 2002, ecstasy/MDMA became more popular than hallucinogens; in 2003, lifetime prevalence reports for use of hallucinogens are currently very similar to lifetime prevalence reports for use of ecstasy. Coinciding with decreases noted in 1998 for many other illicit drugs, lifetime prevalence reports of hallucinogens started on a downward trajectory in 1998 in some of the grades. In 2003, the decline in hallucinogen use continues with substantial decreases noted in grades 8, 10, and 12. Nationwide, lifetime prevalence reports of hallucinogen use in 2003 are below 2001 reports in all three grades surveyed. Hawaii lifetime prevalence reports of hallucinogen use for grades 8, 10, and 12 (1%, 3%, and 7%, respectively) are below nationwide reports in the same grades (4%, 7%, and 11%).
- Reported use of *ecstasy/MDMA* in Hawaii had been on the rise from 1998 to 2002, but finally dropped in 2003. In Hawaii, 1% of the 8th graders, 4% of the 10th graders, and 6% of the 12th graders reported having tried ecstasy at some point in their lifetimes. Nationwide, lifetime prevalence reports of ecstasy use started on a downward trajectory in 2002 and continued on that course in 2003 in grades 8 (3%), 10 (5%), and 12 (8%).
- Lifetime prevalence reports for *methamphetamine* use have been showing a significant decline over the last few years in grades 8, 10, and 12. In 2003, lifetime prevalence reports of methamphetamine use in grades 8, 10, and 12 are down to 1%, 3%, and 4%, which are much lower than 1989 rates of 6%, 10%, and 12%. Nationwide, lifetime prevalence reports of methamphetamine use have been gradually declining over the years in grades 8, 10, and 12. Hawaii reports for having tried methamphetamine are currently at least 2 percentage points lower than nationwide prevalence reports in all grades surveyed.

FIGURE 2
Lifetime Prevalence of Illicit Drug Use (Nationwide vs. Hawaii), by Grade, 2003
 (Entries are percentages %)



FINDINGS: Less than half of the students in Hawaii have tried an illicit drug, and the percentages in Hawaii who reported trying at least one illicit drug are lower than those reported nationwide. Marijuana is the most prevalent drug for students in grades 8, 10, and 12; inhalants are the most prevalent drug for students in grade 6. Among Hawaii’s 8th, 10th, and 12th graders, inhalants are the second most prevalent drug; ecstasy and hallucinogens are the second most prevalent *illicit* drug. Hawaii’s lifetime prevalence reports for illicit drugs are lower than nationwide reports.

- Lifetime prevalence reports for the use of *cocaine* and *heroin or other opiates* had been declining in Hawaii, but over the last few years have started to stabilize. In 2003, cocaine prevalence reports in Hawaii are down in grade 8, but are unchanged in all other grades. Lifetime prevalence rates for cocaine use by Hawaii students in grades 8, 10, and 12 are currently 1%, 3%, and 5%. Almost twice as many students nationwide, compared to those in Hawaii, have tried cocaine. Nationwide, 4% of 8th graders, 5% of 10th graders, and 8% of 12th graders reported having tried cocaine at least once. Lifetime prevalence for heroin or other opiates by Hawaii students in grades 8, 10, and 12 are 1%, 1%, and 2%. Nationwide reports for heroin use are also 2% or less.
- One of the few increases in illicit drug use reported in 2002 was for use of *sedatives or tranquilizers*, which had been declining in years prior. In 2003, lifetime prevalence reports for sedatives and tranquilizers remained unchanged in grades 6 and 12 but decreased by 1 percentage points in grades 8 and 10. Current prevalence reports for sedatives or tranquilizers in grades 8, 10, and 12 are 1%, 3%, and 5%, respectively. Nationwide, prevalence rates for this drug classification had been gradually increasing over the years; significant decreases in the upper grades finally occurred in 2003.
- *Steroid* use in Hawaii has been decreasing over the years and has remained lower than nationwide reports. In 2003, steroid use remains low and relatively unchanged. Nationwide, steroid use has been at historically high levels, but began to stabilize in 2002. Hawaii lifetime prevalence rates for steroid use among students in grades 8, 10, and 12 (2% across all grades) remain lower than nationwide reports by students in the same grades (3%, 3%, and 4%).
- Lifetime prevalence for *alcohol* use remained relatively unchanged from 1989 to 1998 for students in the upper grades. A substantial decrease occurred in 2000 across all grades and has continued through 2003. In 2003, lifetime prevalence reports of alcohol use in grades 6, 8, 10, and 12 are 13%, 37%, 59%, and 73%, down from 2002 reports of 20%, 43%, 65%, and 75%. Nationwide lifetime prevalence reports of alcohol use have also been on a downward trajectory, but nationwide reports in grades 8 (46%), 10 (66%), and 12 (77%) remain slightly higher than Hawaii prevalence reports in the same grades.
- Reports of *drunkenness* are down in 2003, with 2% of 6th graders, 13% of 8th graders, 33% of 10th graders, and 52% of 12th graders in Hawaii reporting that they have been drunk at least once in their lifetimes. Nationwide reports of drunkenness have all been declining across all grades but remain higher than Hawaii reports.
- *Cigarette* use among adolescents was at an all-time high in 1996, both in Hawaii and nationwide. An encouraging decline in cigarette use started in 1998 and has continued on that course over the years. In 2003, 7% of 6th graders, 23% of 8th graders, 36% of 10th graders, and 45% of 12th graders reported trying cigarettes. Lifetime cigarette prevalence reports in 2003 have reached record lows. The continued decrease in prevalence reports of cigarette use corresponds to national trends and, like most substances, Hawaii cigarette prevalence reports remain lower than nationwide reports.
- *Smokeless tobacco* has been tried by only 1% of 6th graders, 3% of 8th graders, 4% of 10th graders, and 8% of 12th graders, which is substantially less than nationwide reports in grades 8 (11%), 10 (15%), and 12 (17%).

FIGURE 3
Lifetime Prevalence of Alcohol and Tobacco (Nationwide vs. Hawaii), by Grade, 2003

(Entries are percentages %)

Figure 3a: Lifetime **Alcohol** Use

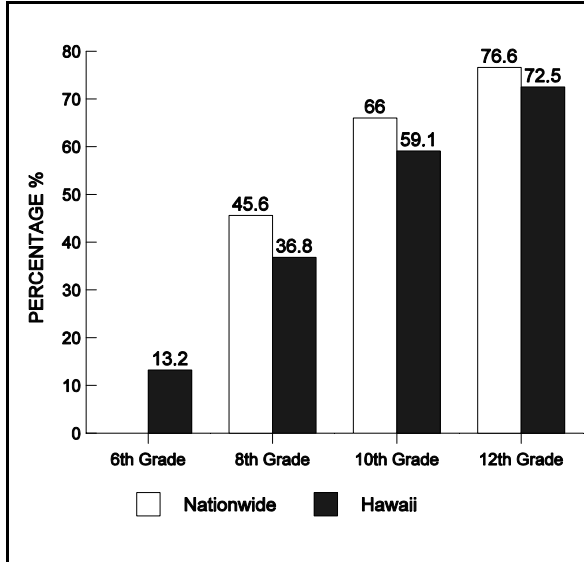


Figure 3b: **Been Drunk** in Lifetime

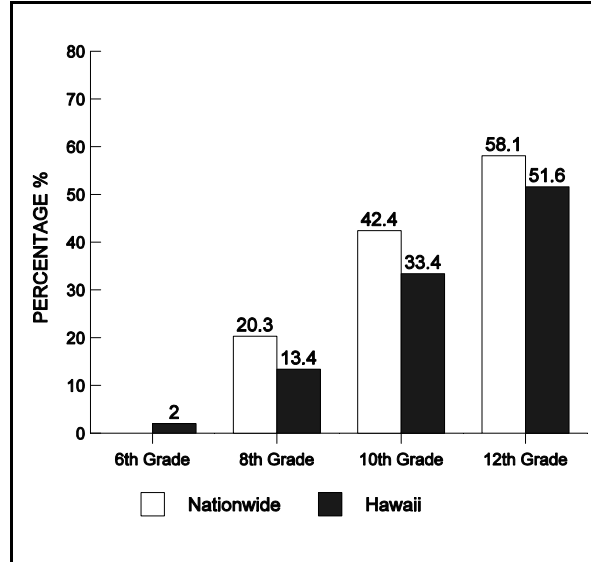


Figure 3c: Lifetime **Cigarette** Use

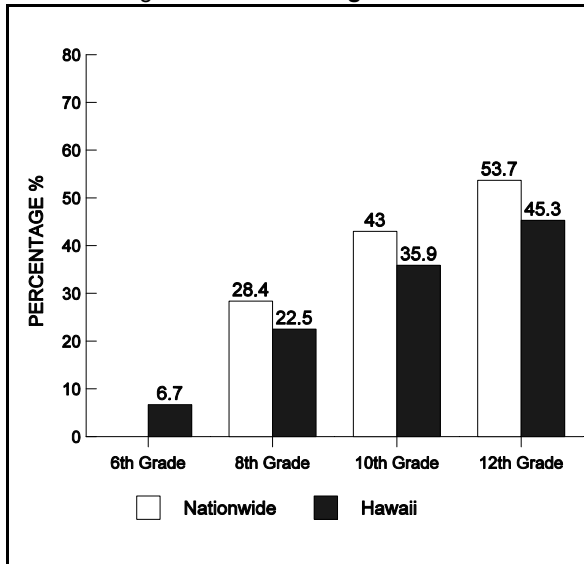
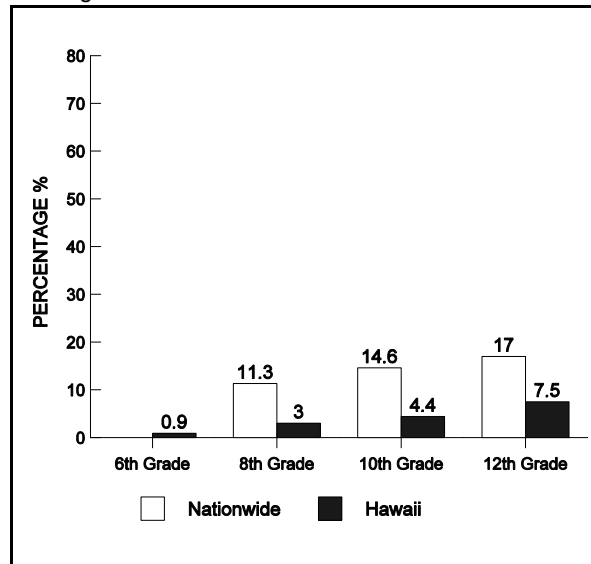


Figure 3d: Lifetime **Smokeless Tobacco** Use



FINDINGS: At least 1 out of 10 students in grade 6 has tried alcohol, and 1 out of 14 students in grade 6 has tried cigarettes. Over a third of the students in grade 8 have tried alcohol, and over one-fifth of them have tried cigarettes. The majority of Hawaii students in grades 10 and 12 have tried alcohol at least once in their lifetimes and nearly half of the seniors reported that they had been drunk. Cigarettes have been tried by over one third of Hawaii students in grades 10 and 12. Very few students have tried smokeless tobacco. Hawaii lifetime prevalence reports for alcohol use, self-reported drunkenness, cigarette use, and smokeless tobacco use are lower than nationwide reports.

SECTION II – MONTHLY AND DAILY PREVALENCE AND TRENDS

From 1993 to 1996, monthly prevalence reports in Hawaii increased substantially for most illicit drugs, across all grades. This rise halted in 1998, with decreases in monthly prevalence reports beginning in 2000 and continuing in 2003 for most illicit drugs, offsetting the large increase in 1996. In 2003, monthly prevalence reports of any illicit drug use are down across all grades. The decrease in 2003 is primarily a result of substantial decreases in monthly marijuana and ecstasy prevalence reports in grades 8, 10, and 12, and decreases in monthly inhalant prevalence reports in grade 6. In the upper grades, modest decreases also occurred in monthly methamphetamine, sedatives or tranquilizer, and hallucinogen use. Monthly prevalence reports for cocaine, heroin or other opiates, and steroids remained fairly stable across most grades. Monthly prevalence reports of alcohol and cigarette use started on a downward trajectory in 1998 and continues on that course in 2003. Nationwide, monthly prevalence reports for various illicit drugs and alcohol remained fairly stable in 2003, with the exception of decreases noted for hallucinogen use by 12th graders and ecstasy use by 8th, 10th, and 12th graders; nationwide monthly cigarette use declined only in the upper grades.

Most substances are not used on a daily basis by Hawaii students except for marijuana, alcohol, and cigarettes. In 2003, daily illicit drug prevalence rates remained stable in grade 6, and decreased slightly in other grades primary as the result of a decline in daily marijuana prevalence rates. Daily alcohol prevalence rates have been on a very gradual decline over the years in all grades. Daily cigarette prevalence rates decreased substantially in 2000, and have continued on that course, with substantial decreases noted in the upper grades. Nationwide, daily marijuana and daily alcohol use have remained relatively stable, but daily cigarette use has continued to drop over the years.

Refer to Table 2 for monthly prevalence data, Table 3 for daily prevalence data, and Table 4 for nationwide comparison data (see Appendix A). Figure 4 illustrates trends in monthly substance use from 1987 to 2003, Figure 5 displays the nationwide comparison data for monthly substance use, and Figure 6 displays nationwide comparison data for daily substance use.

- Monthly use of *any illicit drug* increased drastically for all grade levels in 1996 and began to drop back down by 2000. In 2003, monthly prevalence reports for any illicit drug use dropped across all grades in Hawaii and are currently at 4% in grade 6, 10% in grade 8, 17% in grade 10, and 20% in grade 12. Monthly prevalence rates for any illicit drug use are lower in Hawaii than nationwide. Nationwide, monthly prevalence rates for any illicit drug use in grades 8, 10, and 12 are 12%, 21%, and 25%, respectively.
- In grade 6, the decrease in monthly use of any illicit drug was the result of a 1 percentage point decrease in monthly *inhalant* use, bringing the prevalence rate in grade 6 down to 2%. Monthly inhalant prevalence reports remain stable in grades 8, 10, and 12 at 4%, 2%, and 1%, respectively.
- Reports of monthly illicit drug use among students in grades 8, 10, and 12 have changed the most for marijuana and ecstasy. The percentages of 8th, 10th and 12th graders in Hawaii who reported using *marijuana* in the past 30 days are down by at least 3 percentage points in 2003. In 2003, 1% of 6th graders, 7% of 8th graders, 15% of 10th graders, and 18% of 12th graders reported using marijuana in the past 30 days. Monthly prevalence rates for marijuana use are lower in Hawaii than nationwide. Nationwide, monthly prevalence rates for marijuana use in grades 8, 10, and 12 are 8%, 17%, and 21%, respectively.

FIGURE 4
Trends in Monthly (30-Day) Prevalence of Any Illicit Drug, Alcohol, and Cigarette Use
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

Figure 4a: Sixth Grade 30-Day Prevalence

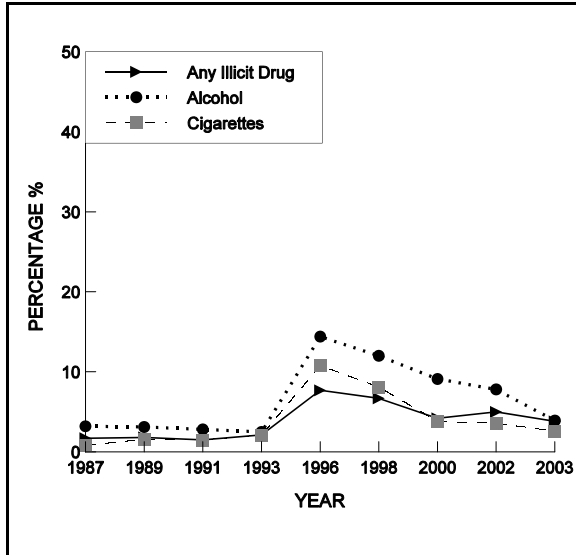


Figure 4b: Eighth Grade 30-Day Prevalence

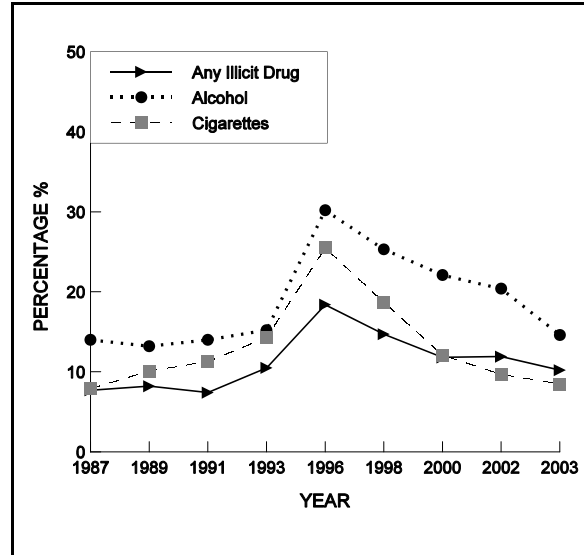


Figure 4c: Tenth Grade 30-Day Prevalence

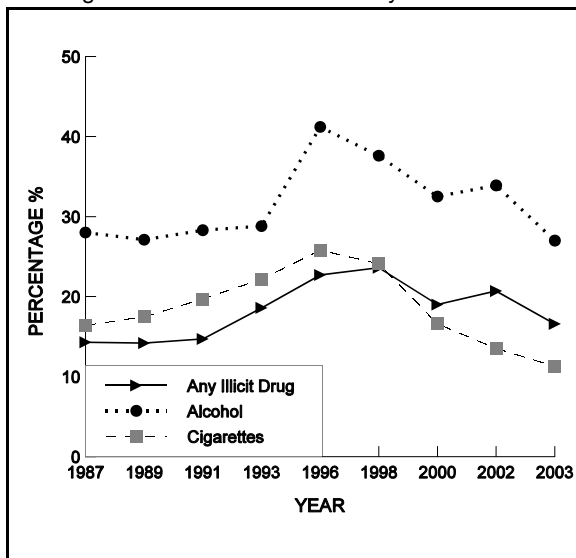
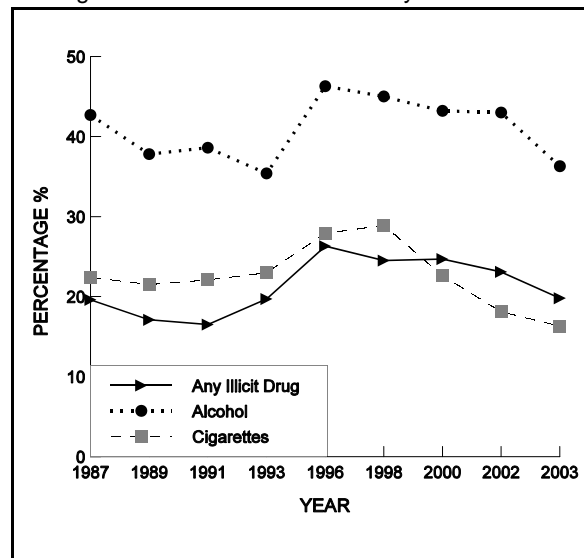


Figure 4d: Twelfth Grade 30-Day Prevalence



FINDINGS: Monthly use of any illicit drug, alcohol, and cigarettes increased drastically for all grade levels in 1996. This rise halted in 1998, with decreases in monthly prevalence reports beginning in 2000 and continuing in 2003 for any illicit drug use, offsetting the large increase in 1996. Monthly prevalence reports of alcohol use started on a downward trajectory in 1998 and continues on that course in 2003. Reports of monthly cigarette use started dropping in 1998 in grades 6, 8, and 10, and have continued to drop dramatically over the years. In grade 12, reports of monthly cigarette use peaked in 1998, and have been declining ever since. Nearly half as many 12th graders reported monthly cigarette use in 2003, compared to 1998

- Hawaii reports of monthly *ecstasy* use started to drop in 2002 in grade 12, but remained fairly stable in other grades. In 2003, decreases in monthly ecstasy use occurred in grades 8, 10 and 12 – each decrease representing a near 50% decrease in prevalence reports. Monthly ecstasy prevalence reports were 2% in grades 8 and 10, and 3% in grade 12 back in 2002. In 2003, monthly ecstasy prevalence reports in Hawaii dropped to 1% in grades 8, 10, and 12. Monthly ecstasy prevalence reports also dropped nationwide in all grades surveyed and are currently at 1%.
- Reports of monthly *methamphetamine*, *sedative/tranquilizer*, and *hallucinogen* use each dropped by 1 percentage point in the upper grades. Monthly prevalence reports of each of these drugs are currently 1% or less across all grade levels.
- Reports of *daily use of any illicit drug* are currently at all-time lows in Hawaii in grades 6, 8, 10, and 12 (0.4%, 1.5%, 3.3%, and 4.8%). Decreases in daily reports of any illicit drug use are a result of declines in daily marijuana use; daily use of other illicit drugs remain stable and virtually non-existent in the student population. *Daily marijuana use* started to drop in 1998 and continued to drop across all grades in 2000, but rose slightly in grade 10 in 2002. In 2003, reports of daily marijuana use among Hawaii students in grades 8, 10, and 12 are 1%, 3%, and 4%, respectively. Nationwide, daily marijuana prevalence rates remain stable in grades 8, 10, and 12 at 1%, 4%, and 6%, respectively.
- Monthly *alcohol* prevalence reports peaked in 1996 and started on a downward trajectory in 1998. Although 2002 witnessed a slight increase in monthly alcohol reports among 10th graders, in 2003, monthly alcohol prevalence reports headed back down for all grades surveyed. Reports of monthly alcohol use in 2003 are substantially lower than 1996 reports. Monthly prevalence reports of alcohol use in grades 6, 8, 10, and 12 are currently 4%, 15%, 27%, and 36%. Nationwide, monthly prevalence reports of alcohol use in grades 8, 10, and 12 are 20%, 35%, and 48%. Thus, monthly alcohol prevalence reports in Hawaii are lower than nationwide reports.
- Monthly *cigarette* use reached its peak in 1996 in grades 6, 8, and 10, but has been dramatically dropping ever since. Among 12th graders, monthly cigarette use peaked in 1998, and has been declining ever since. Nearly half as many 12th graders reported monthly cigarette use in 2003 (16%), compared to 1998 (29%). In 2003, only 3% of 6th graders, 9% of 8th graders, 11% of 10th graders, and 16% of 12th graders indicated that they smoked cigarettes in the past month. Nationwide, monthly cigarette prevalence reports have also been on the decline, but remain higher than those reported in Hawaii.
- Hawaii reports of *daily alcohol* and *daily cigarette* use are lower in 2003 than in all previous survey years. Daily alcohol use rates in Hawaii have gradually decreased over the years. Back in 1996, daily alcohol prevalence reports in grades 6, 8, 10, and 12 were 1%, 3%, 4%, and 5%. In 2003, daily alcohol prevalence reports for the same grades are 0%, 2%, 2%, and 3%. Daily cigarette use rates have declined more dramatically over the years. Back in 1996, daily cigarette prevalence reports in grades 6, 8, 10, and 12 were 1%, 7%, 11%, and 14%; compared to 2003 reports of 0%, 2%, 3%, and 7%. Nationwide reports of daily alcohol use in grades 8 (1%), 10 (2%), and 12 (3%) remain stable and are fairly similar to those noted in Hawaii. Nationwide reports of daily cigarette use have been declining, but are currently twice as high as those noted in Hawaii.

FIGURE 5
Monthly (30-Day) Prevalence of Substances (Nationwide vs. Hawaii), by Grade, 2003
 (Entries are percentages %)

Figure 5a: 30-Day Prevalence of **Any Illicit Drug Use**

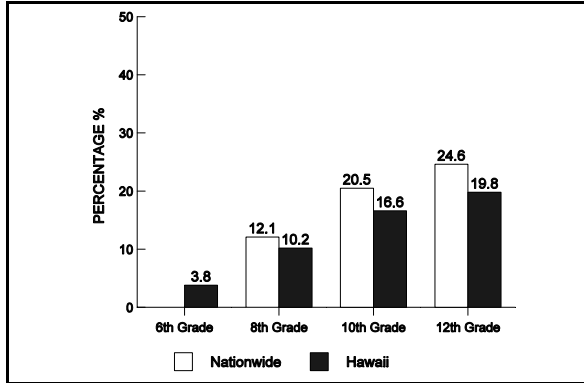


Figure 5b: 30-Day **Marijuana Use**

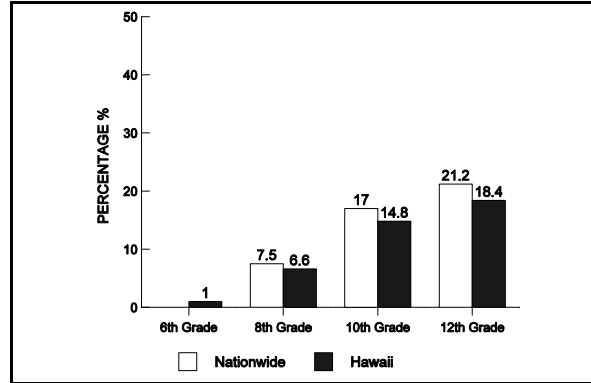


Figure 5c: 30-Day **Inhalant Use**

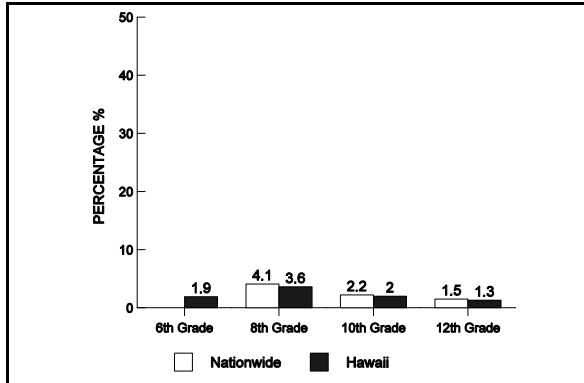


Figure 5d: 30-Day **Alcohol Use**

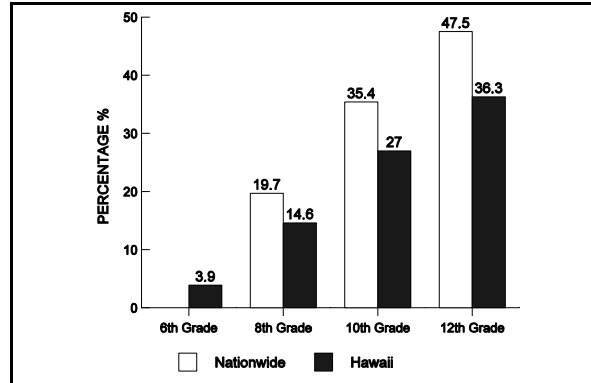


Figure 5e: 30-Day **Cigarette Use**

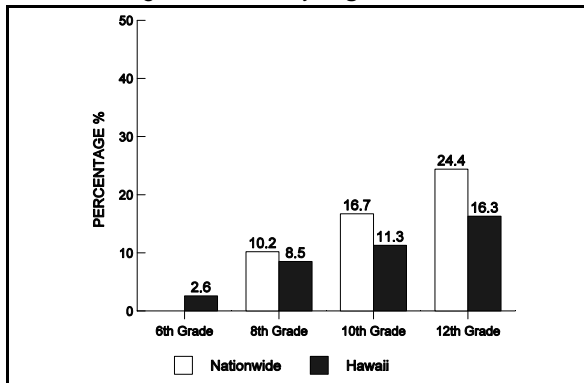
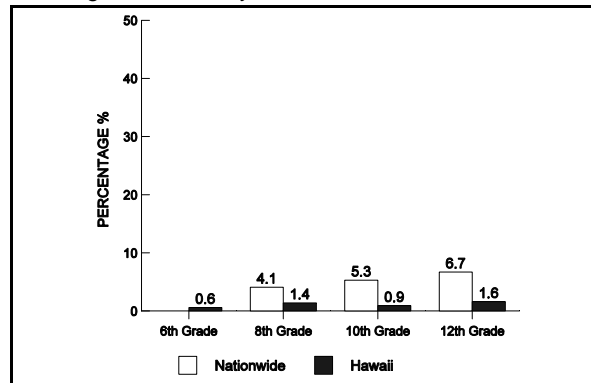
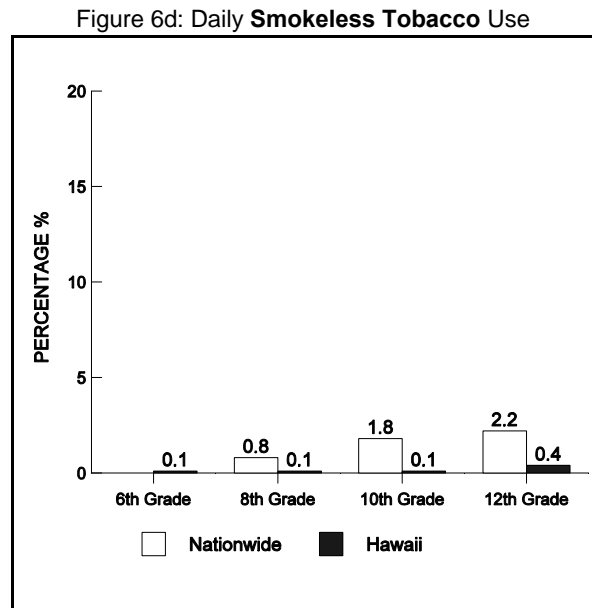
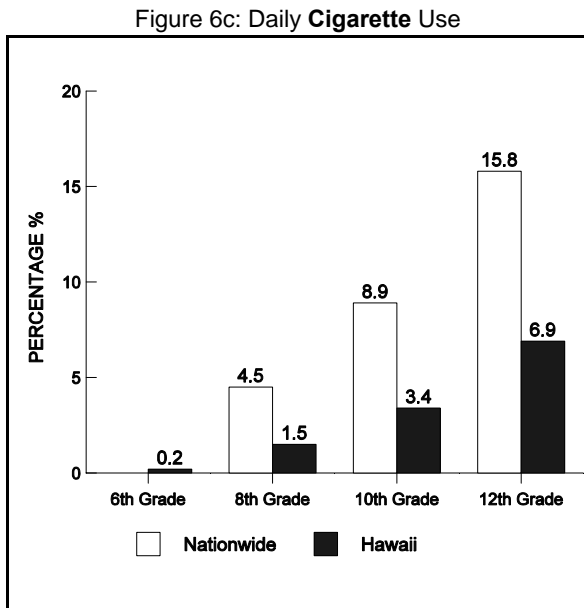
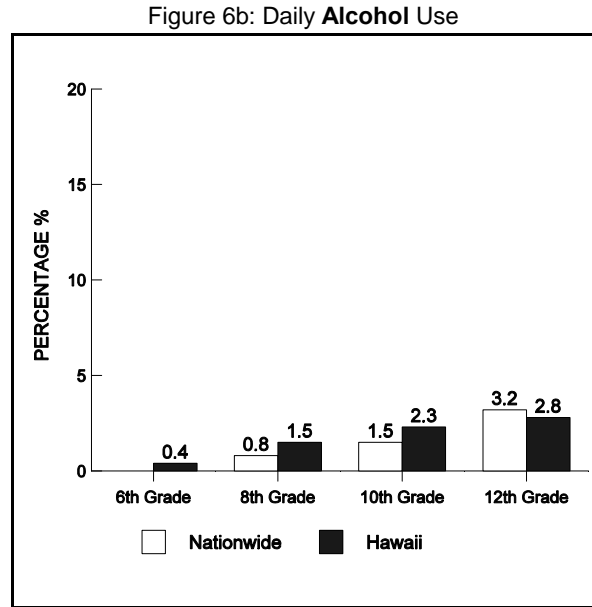
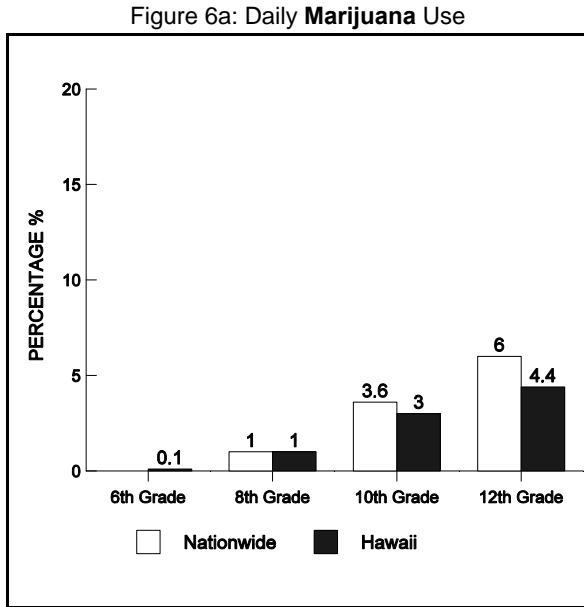


Figure 5f: 30-Day **Smokeless Tobacco Use**



FINDINGS: Nearly one-fifth of Hawaii seniors reported monthly marijuana use and over one third of them reported monthly alcohol use. Cigarettes have lower monthly prevalence rates than marijuana and alcohol, with less than one-fifth of the students in all grades reporting they have used cigarettes in the past 30 days. Although inhalants are one of the most prevalent drugs, very few Hawaii students reported using inhalants in the past 30 days. Hawaii monthly prevalence reports for use of illicit drugs, alcohol, and tobacco are typically much lower than nationwide reports. The exception is in grade 8, where Hawaii students' monthly prevalence reports for inhalant use is fairly reflective of reports.

FIGURE 6
Daily Prevalence of Marijuana, Alcohol, and Tobacco (Nationwide vs. Hawaii), 2003
 (Entries are percentages %)



FINDINGS: Very few students in Hawaii reported daily substance use (i.e., use of a substance on 20 or more occasions in the past 30 days). Although reports of daily cigarette use by seniors (7%) is nearly twice as high as their reports of daily marijuana (4%) or daily alcohol use (3%), reports of daily cigarette and marijuana use are fairly equivalent to one another for students in grades 6, 8, and 10. Nationwide reports of daily cigarette and smokeless tobacco use are more than twice as high as Hawaii reports. Reports of daily marijuana and alcohol use in Hawaii are fairly similar to daily reports of these substances nationwide.

SECTION III – TREATMENT NEEDS

Beginning in 1996, adolescent treatment needs in the State of Hawaii have been assessed in the survey by applying the DSM-III-R criteria for substance abuse, which emphasize negative social and interpersonal consequences resulting from using alcohol and illicit drugs. The present study used the DSM-III-R criteria to determine adolescent treatment needs for alcohol, marijuana, stimulants (cocaine, methamphetamine, or speed), depressants (downers, sedatives, or heroin), hallucinogens, and club drugs (ecstasy, GHB, Rohypnol, or ketamine). Two types of diagnoses are distinguished by the DSM-III-R criteria: dependence and abuse. Dependence is the most severe diagnosis and includes physiological symptoms, such as tolerance and withdrawal, and behavioral symptoms, such as impaired control over the use of a substance. Abuse is a residual category for those who do not meet the criteria of dependence but who use substances in dangerous situations or who use substances despite having problems related to their substance use. Because of the high likelihood that substance abuse by adolescents will turn into a dependency problem, students are considered needing treatment, or at least screening for treatment, if they meet either a dependence or abuse diagnosis for any of the six substance classifications.

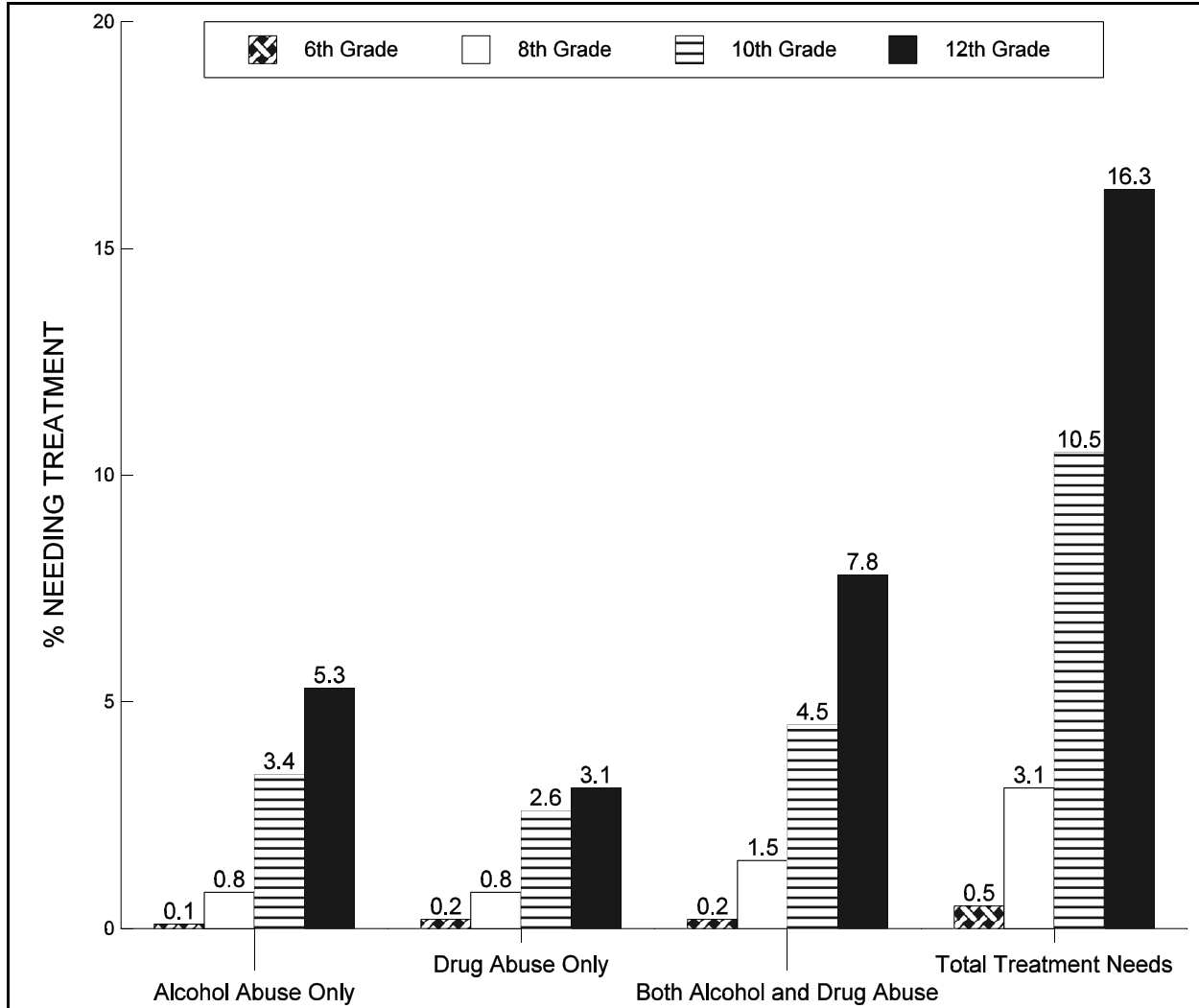
Substance abuse treatment is needed for 1% of 6th graders, 3% of 8th graders, 11% of 10th graders, and 16% of 12th graders. Many students who abuse alcohol also abuse illicit drugs, and the most common illicit drug abused is marijuana. Seven percent ($n = 6,525$) of the public school students in grades 6 through 12 are estimated to need treatment for alcohol and/or drug abuse. Statewide treatment needs for the combined public, private, and charter school population in grades 6 through 12 are estimated to be 7,826 (7%), which is less than estimated statewide treatment needs in 2002 (11%), 2000 (13%), 1998 (16%), and 1996 (10%). As in previous years, treatment needs are highest in Hawaii and Maui Counties (10% each) and lowest in the City & County of Honolulu (6%) and Kauai County (7%). The City & County of Honolulu, however, has a much larger number of students with treatment needs ($n = 3,759$) than Hawaii ($n = 1,330$), Kauai ($n = 392$), or Maui Counties ($n = 1,044$). At the district level, Windward District exceeds other districts on Oahu in regards to the proportion of students needing treatment (9%); all other districts on Oahu have 6% of their students needing treatment. Although the State of Hawaii has effective residential, outpatient, and school-based treatment programs for adolescents, the majority of the students diagnosed with a substance abuse problem from the current study have failed to utilize a treatment program. However, the proportion of students reporting that they have utilized a treatment facility has nearly doubled since 2002. In 2003, 23% of 6th graders, 25% of 8th graders, 18% of 10th graders, and 15% of 12th graders who met the DSM-III-R criteria for having an alcohol or drug abuse problem reported that they have received help from a treatment program in the past year.

Refer to Table 5 for statewide treatment needs in grades 6, 8, 10, and 12 for each substance classification, and refer to Table 6 for estimated statewide, county-level, district-level, and school-type (i.e., public versus private) treatment needs for students in grades 6 through 12 (see Appendix B). Figures 7 and 9 illustrate statewide treatment needs for various substances, Figure 9 displays trends in statewide treatment needs, and Figure 10 displays trends in district treatment needs.

- In 2003, 1% of 6th graders, 3% of 8th graders, 11% of 10th graders, and 16% of 12th graders met the criteria of needing substance abuse treatment. Approximately half of the students who need treatment require help for *both* alcohol and drug abuse rather than for either of these alone. For instances, 8% of the seniors need treatment for *both* alcohol and drug abuse, whereas 5% need treatment for *only* alcohol abuse, and 3% need treatment for *only* drug abuse.

FIGURE 7
2003 Hawaii Statewide Treatment Needs for Alcohol and Drug Abuse
Based on the DSM-III-R Criteria, by Grade

(Entries are percentages %)



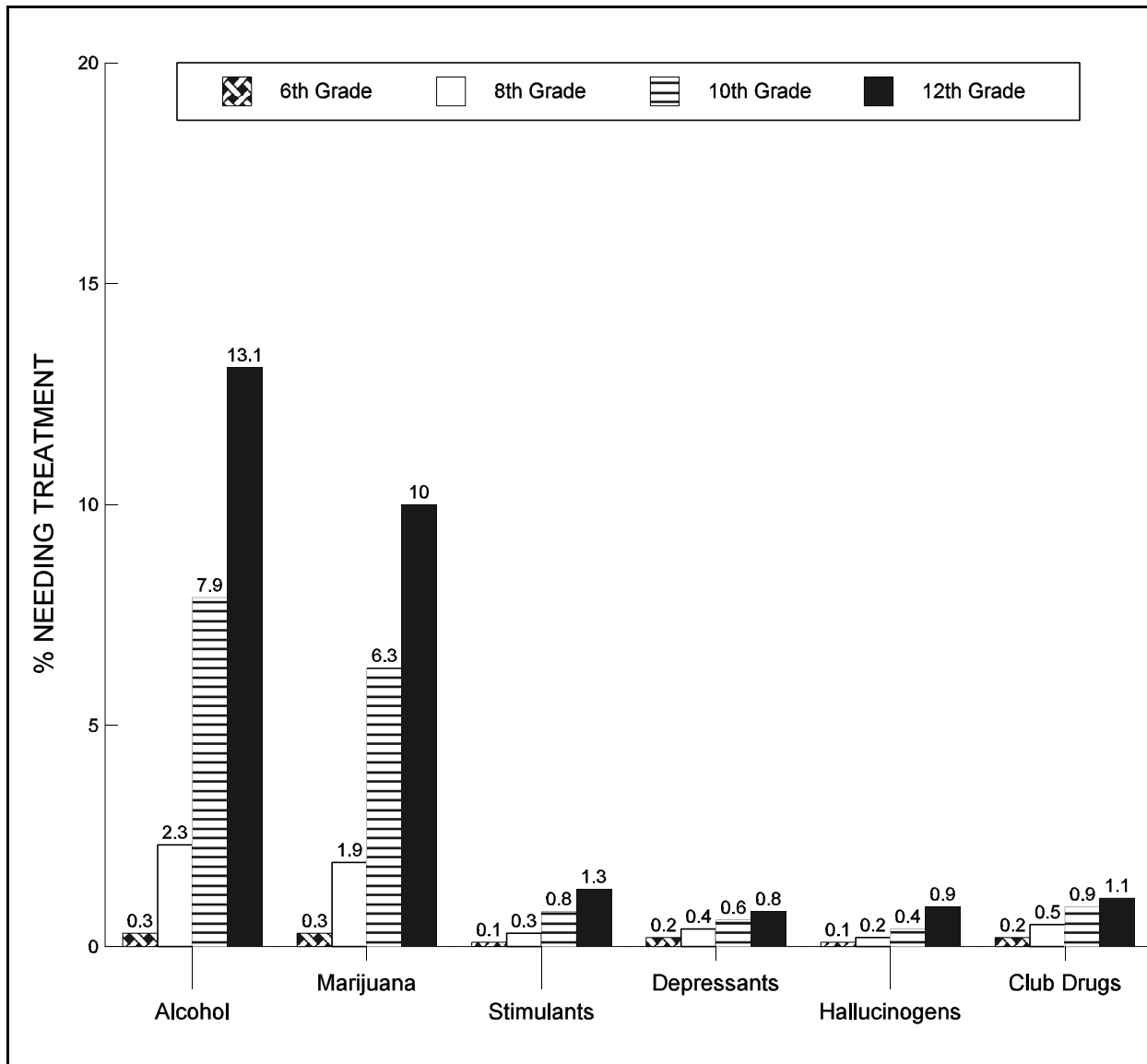
FINDINGS: Approximately half of the students who need treatment need help for both alcohol and drug abuse rather than for either of these alone. At least 1 out of 10 students in grades 10 (11%) and 12 (16%) need treatment for substance abuse; more than 50% of these students who need treatment need help for both an alcohol and drug abuse problem. Very few students in the lower grades need substance abuse treatment, but given the seriousness of the diagnosis, the percentages are still alarmingly high.

NOTES: *Alcohol Abuse Only* includes students classified as dependent on or abusers of alcohol according to the DSM-III-R criteria, but who are not dependent on or abusers of illicit drugs. *Drug Abuse Only* includes students classified as dependent on or abusers of at least one illicit drug according to the DSM-III-R criteria, but who are not dependent on or abusers of alcohol. Illicit drug dependency/abuse is assessed for marijuana, stimulants, depressants, “club drugs” (ecstasy/MDMA, GHB, Rohypnol, or ketamine), and hallucinogens. *Both Alcohol and Drug Abuse* includes students classified as dependent on or abusers of both alcohol and illicit drugs. *Total Treatment Needs* refers to any substance abuse and includes students who are classified as dependent on or abusers of alcohol, illicit drugs, or both alcohol and illicit drugs, according to the DSM-III-R criteria.

- Illicit drug treatment needs are largely a function of marijuana abuse. The percentage of students needing treatment for marijuana abuse in grades 8 (2%), 10 (6%), and 12 (10%) are only slightly lower than the percentage of students in the same grades needing treatment for any alcohol abuse (2%, 8%, and 13%, respectively).
- Estimated statewide treatment needs for public school students in grades 6 through 12 are as follows: 2,067 students (2%) for alcohol abuse only; 1,753 students (2%) for drug abuse only; 2,713 students (3%) for both alcohol and drug abuse; and 6,525 students (7%) for any substance abuse. Adding private school students to the statewide treatment needs estimates brings the total number of students needing treatment for any substance abuse to 7,826, or 7% of the total student population.
- Broken out by county, Hawaii and Maui Counties have the largest proportion of students in grades 6 through 12 estimated to need treatment (10% each), followed by Kauai County (7%) and the City & County of Honolulu (6%). The City & County of Honolulu, however, has a much larger *number* of students in grades 6 through 12 estimated to need treatment ($n = 3,759$) than Hawaii ($n = 1,330$), Maui ($n = 1,044$), or Kauai Counties ($n = 392$). At the district level, Windward District exceeds other districts on Oahu in regards to treatment needs (9%); other districts on Oahu have treatment needs estimated at 6%.
- Statewide treatment needs for alcohol and/or drug abuse increased drastically from 1996 to 1998 but have been dropping ever since. Total estimated treatment needs for students in grades 6 through 12 were 10% in 1996, 16% in 1998, 13% in 2000, and 10% in 2002. Statewide treatment needs in grades 6 through 12 are currently at 7%.
- Treatment needs dropped across all counties in 2003, bringing county-level treatment needs below treatment needs reported in 1996. Kauai County witnessed the greatest decrease in treatment need estimates in 2003. Treatment need estimates in Kauai County were 11% in 1996, jumped to 17% in 1998, decreased only slightly in 2000 (16%), and then dropped substantially in both 2002 (13%) and 2003 (7%). Treatment need estimates in Hawaii County followed a similar pattern going from 14% in 1996, up to 21% in 2000, down slightly in 2002 (20%), and then dropping significantly in both 2002 (14%) and 2003 (10%). Maui County also followed this pattern going from 13% in 1996, up to 18% in 1998, and then down to 17% in 2000, 14% in 2002, and 10% in 2003. Treatment need estimates in the City & County of Honolulu were only 8% in 1996, nearly doubled in 1998 (15%), and then dropped in 2000 (12%), 2002 (9%), and 2003 (6%).
- Over the years, certain subgroups of the population have consistently had higher treatment needs than other subgroups. Consistent with previous years, females in grades 8 and 10 had slightly higher treatment needs than males in grades 8 and 10. Treatment needs have been higher among males than females in grade 12. In 2003, 12th-grade females surpassed 12th-grade males in regards to total treatment needs. Native Hawaiian and White students have consistently had higher treatment needs than Japanese, Filipino, and Chinese students. This trend continues in 2003.
- In 2003, 23% of the 6th graders, 25% of the 8th graders, 18% of the 10th graders, and 15% of the 12th graders who met the DSM-III-R criteria for having an alcohol or drug abuse problem reported they received help from a treatment program during the past year. These percentages are approximately twice as high as those reported in 2002.

FIGURE 8
2003 Hawaii Statewide Treatment Needs for Abuse of
Alcohol and Other Drugs Based on the DSM-III-R Criteria, by Grade

(Entries are percentages %)

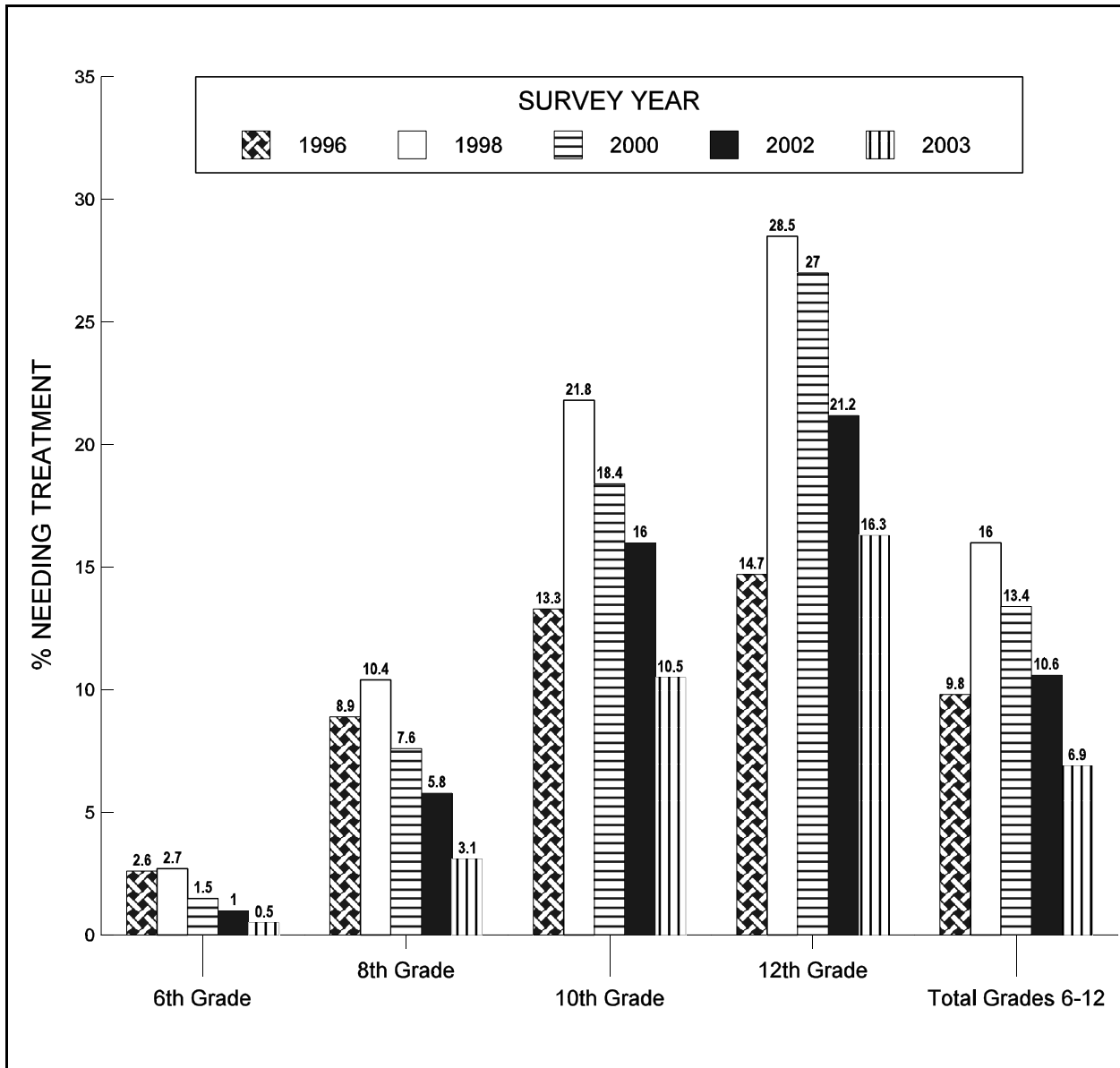


FINDINGS: Treatment needs are higher for alcohol abuse than for any other substance. Marijuana is the most commonly abused illicit drug, with the percentages of students needing treatment for marijuana abuse only slightly lower than the percentages of students needing treatment for alcohol abuse.

NOTES: The percentages in the chart reflect the total treatment needs (abuse or dependency diagnosis) for each type of substance. The categories above are not mutually exclusive because some students who abuse one substance may also abuse another substance (e.g., a student may need treatment for both alcohol and marijuana abuse). Thus, total treatment needs cannot be determined by adding across substances listed in the chart. Refer to Figure 7 for total treatment needs. *Stimulants* include cocaine, methamphetamine, and speed. *Depressants* include downers, sedatives, and heroin. *Club Drugs* include ecstasy/MDMA, GHB, Rohypnol, and ketamine.

FIGURE 9
Trends in Hawaii Statewide Treatment Needs (1996-2003)

(Entries are percentages %)

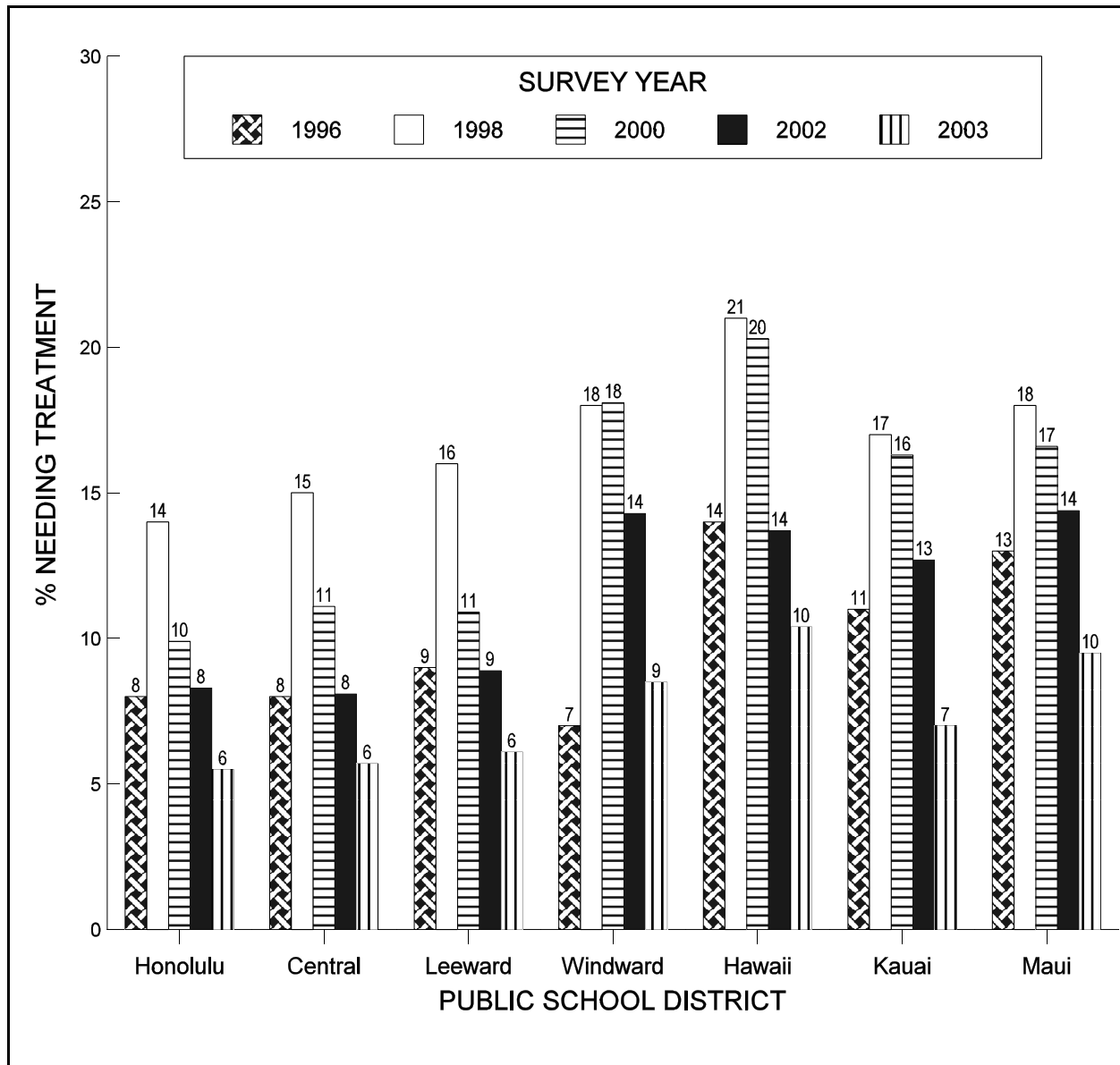


FINDINGS: Statewide treatment needs for alcohol and/or drug abuse increased drastically from 1996 to 1998, particularly in the upper grades. Statewide treatment needs began an encouraging downward trend in 2000. Treatment needs in 2003 are lower than 1996 estimates in grades 6, 8, and 10; treatment needs have been declining in grade 12, but remain higher than 1996 estimates. In 2003, total statewide treatment needs in grades 6 through 12 are estimated at 7% of the student population.

NOTES: Statewide estimates provided in the graph are for public, private, and charter school students who need treatment for dependence on or abuse of one or more of the following substances: alcohol, marijuana, stimulants, depressants, hallucinogens, or club drugs. *Total Grades 6-12* refers to the percentage of students in grades 6 through 12 who are estimated to need treatment for substance abuse based on the DSM-III-R screening criteria.

FIGURE 10
Trends in Hawaii Public School District Treatment Needs (1996-2003)

(Entries are percentages %)



FINDINGS: Total treatment needs nearly doubled across most districts from 1996 to 1998 and then dropped or remained unchanged in 2000. In 2003, total treatment needs dropped by 2 to 6 percentage points in all districts, which brings treatment needs in every district, except Windward District, to a level that is lower than 1996 treatment need estimates; 2003 treatment need estimates in Windward District are 2 percentage points higher than 1996 estimates. Over the years, Hawaii District has had among the highest treatment needs. Beginning in 2002, treatment needs in Hawaii District have been fairly similar to treatment needs in Maui and Windward Districts. Consistent with previous years, treatment needs in 2003 are lower in Honolulu, Central, and Leeward Districts than other districts.

NOTES: Statewide estimates provided in the graph are for public school students who need treatment for dependency on or abuse of one or more of the following substances: alcohol, marijuana, stimulants, depressants, hallucinogens, or club drugs.

SECTION IV – PREVENTION NEEDS

For decades, student surveys have addressed core predictor variables such as age of onset, adolescent attitudes and beliefs about substances, societal influences, and demographic background of the students. Recent attention has turned to the role of risk and protective factors in the domains of community, family, school, and peer-individual to explain substance use initiation and continuation, and to help communities prioritize prevention efforts. The risk and protective factor framework addresses measurable risk factors, which are precursors for drug and alcohol problems, and measurable protective factors, which “moderate or buffer” the impact of risk factors by improving coping, adaptation, and competence. This section overviews factors related to substance use and addresses the risk and protective framework.

Refer to Appendix C for tables that address various factors related to use, such as onset of substance use (Table 7), perceived harmfulness of substances (Table 8), friends’ disapproval of substances (Table 9), frequent exposure to substance use (Table 10), perceived availability of substances (Table 11), substance use offers and ability to resist offers (Table 12), and annual prevalence of antisocial behaviors (Tables 13). Refer to Appendix D for risk and protective factor tables designed to guide statewide prevention efforts. Figure 11 illustrates trends in perceived harmfulness of substances, Figure 12 displays perceived availability of substances, and Figure 13 displays trends in ability to purchase alcohol and tobacco.

- Across all grade levels, incidence of alcohol use is higher, and onset is earlier, than for all other substances. **Age of onset for alcohol and tobacco** use correlates with the use of every illicit drug surveyed, the total number of different drugs tried, amount of marijuana use, and substance abuse. Alcohol is the only substance having a high initiation rate clearly beginning by 9 years old or younger (on average, 10% reported having tried alcohol by 9 years of age). The only other substance that has onset clearly beginning by 9 years old or younger is cigarettes. Onset of drunkenness varies by grade level reporting, and is anywhere between ages 12 and 16. The recommended age of alcohol and tobacco education, based on retrospective reports, is by age 9, with education efforts continually reinforced in years that follow.
- **Onset of illicit drugs** occurs as early as 9 years of age, but most typically between the ages of 13 and 16. The use of **marijuana**, however, is begun by 9 or 10 years of age, with, on average, 8% of the students reporting use of marijuana by the time they were 12 years old and 15% of the upper grade students reporting use by the time they were 13 years old. Approximately one third of the students reported they had used marijuana by the time they were 15 years old. Thus, efforts to educate about the dangers of marijuana use should occur by age 9, with the strongest efforts occurring in the 8th grade.
- The majority of students view the occasional use of illicit drugs, weekend binge drinking, and daily cigarette smoking as causing a lot of harm to the user. **Beliefs about harmfulness** associated with various illicit drugs increased in 2003 in the lower grades, but tapered off or dropped slightly in the upper grades. The exceptions were for marijuana and ecstasy risk perceptions where increases were noted across all grades in 2003. The proportion of students indicating a lot of harm associated with alcohol and cigarettes had been climbing over the years, but started to decline in 2000. In 2003, risk perceptions for alcohol and cigarettes are up in the lower grades, but have continued to decrease slightly or stabilize in the upper grades. Hawaii has a greater proportion of students associating harm with various substances than nationwide.

FIGURE 11
Trends in Perceived Harmfulness Associated With Substances, by Grade, 1987-2003

Figure 11a: Use **Marijuana** Occasionally

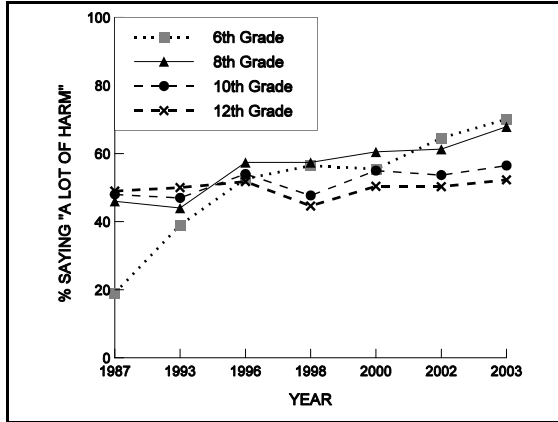


Figure 11b: Use **Hallucinogens** Occasionally

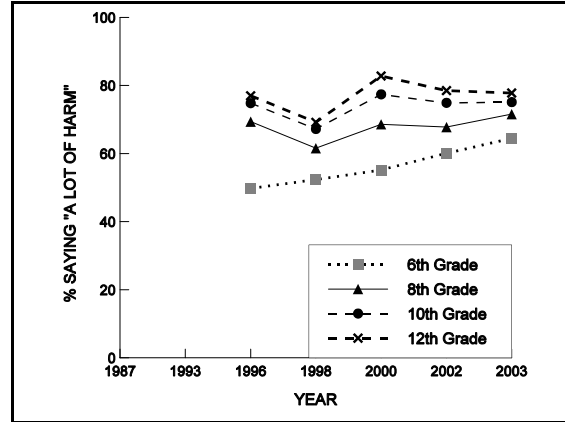


Figure 11c: Use **Cocaine** Occasionally

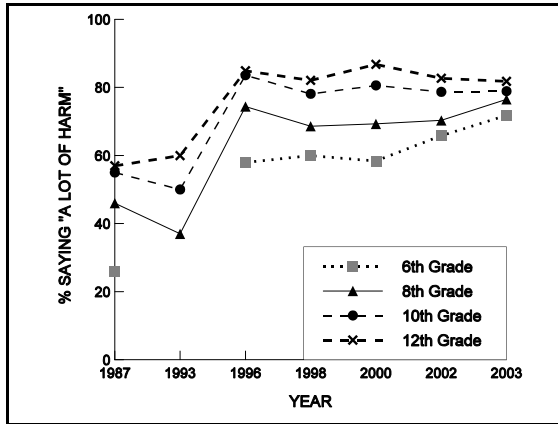


Figure 11d: Use **Methamphetamine** Occasionally

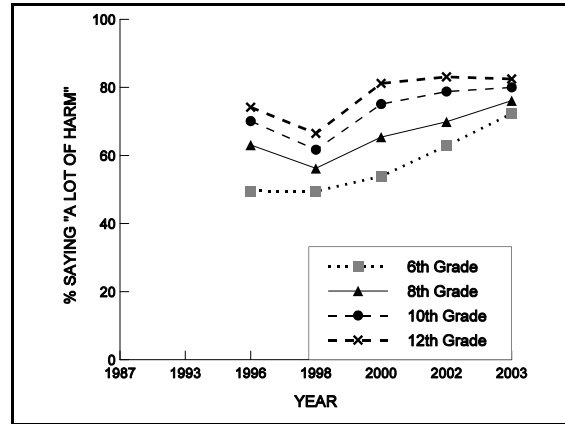


Figure 11e: **Weekend Binge Drinking**

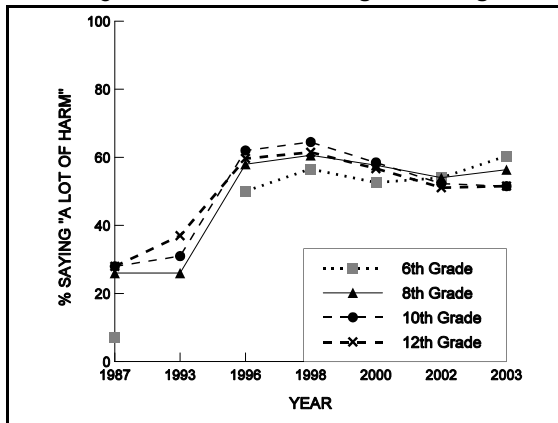
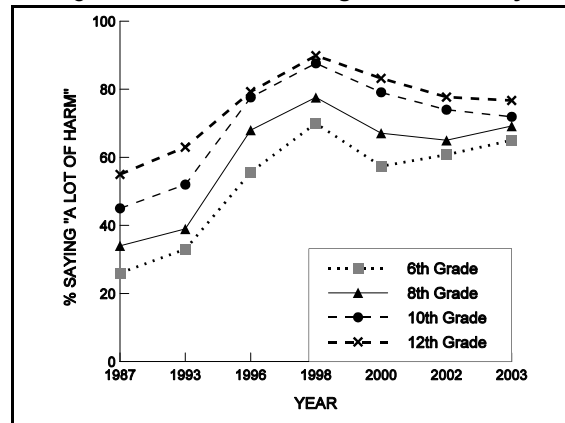


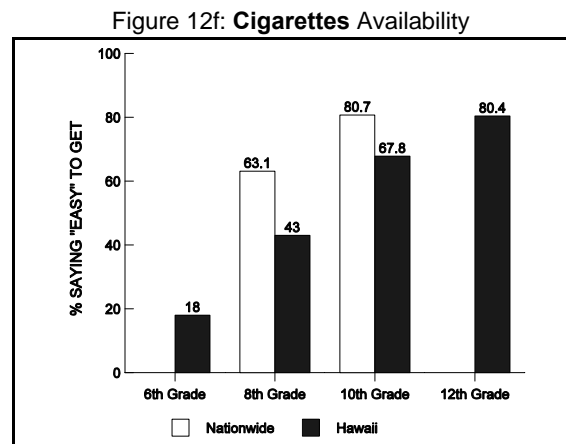
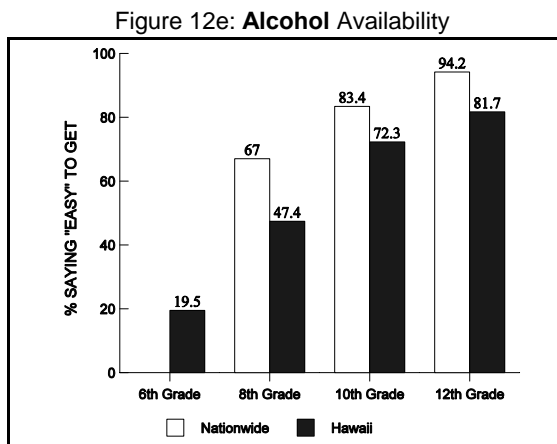
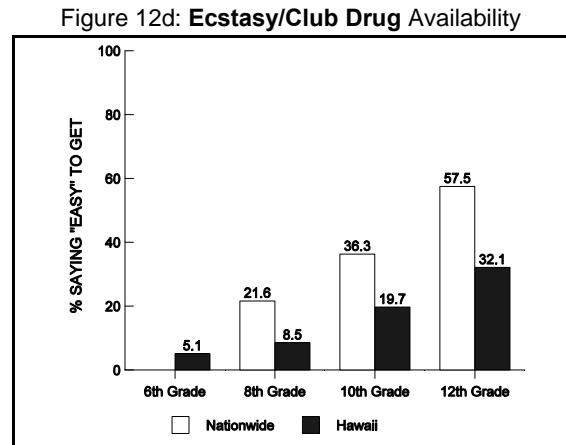
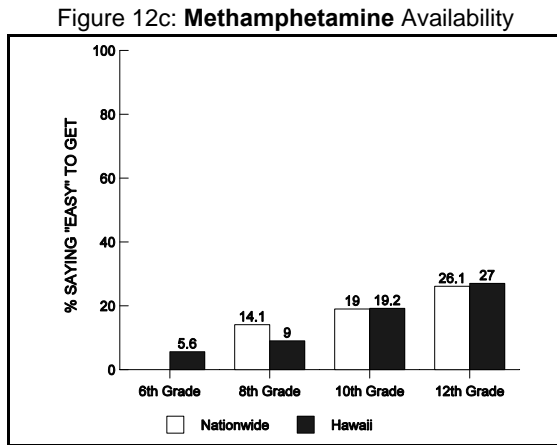
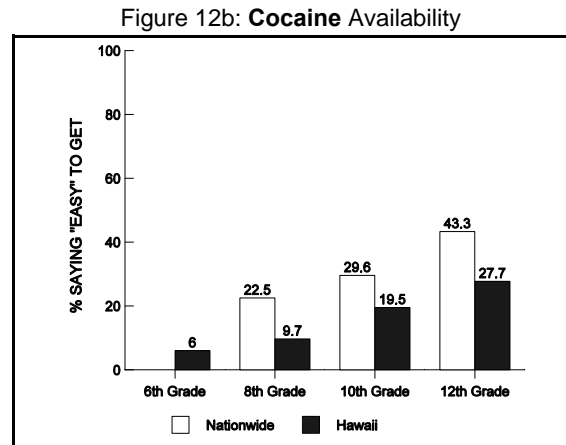
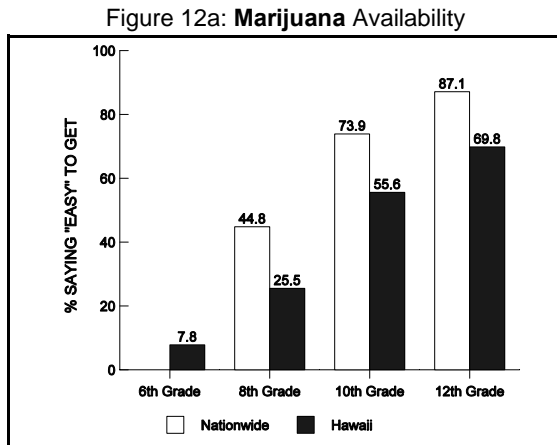
Figure 11f: **1+ Packs of Cigarettes Per Day**



FINDINGS: In 2003, risk perceptions are up for all illicit drugs, alcohol, and cigarettes among students in the lower grades. In grade 10, risk perceptions are up for marijuana, methamphetamine and ecstasy; down for alcohol and cigarettes; and stable for all other drugs. In grade 12, risk perceptions are up for marijuana and ecstasy, and down slightly for most other substances. Ecstasy trends are not represented above because trend data is just available for 2002 and 2003.

- One of the variables most likely to protect an adolescent from substance use is *peer disapproval perceptions*. The vast majority of students believe that their friends would not condone the use of illicit drugs, with disapproval ratings for illicit drugs, other than marijuana, around 90% for all grade levels. The occasional use of marijuana, on the other hand, is nearly as accepted as weekend binge drinking and slightly more accepted than smoking one or more packs of cigarettes a day in the upper grades.
- *Exposure to substance use* by community, family, and friends is one of the best predictors of alcohol, tobacco, and other drug use. More than one third of the 8th graders and more than half of the 10th and 12th graders are frequently exposed (once a week or more) to at least one individual who uses *tobacco*. The primary source of tobacco exposure is parents for students in the lower grades; the primary source of tobacco exposure is other people in the students' environment for students in the upper grades. Slightly fewer students are frequently exposed to *alcohol* use than tobacco use. The primary source of alcohol exposure is from parents for students in all grades. In 2003, the percentages of students frequently exposed to tobacco declined. The percentages of students frequently exposed to alcohol, however, decreased only slightly in grade 6 and 10, remained stable in grade 8, and increased in grade 12. Frequent exposure to *illicit drugs* is reported by 10% of 8th graders, 16% of 10th graders, and 19% of 12th graders and is typically a result of exposure by close friends and other people in the students' environment. Students in grade 6 are not frequently exposed to illicit drug use by their friends, but 3% of the 6th graders reported being frequently exposed to illicit drug use by parents, relatives, and other people in their environment. The percentage of 6th graders exposed to illicit drugs has remained stable over the last few years; students in other grades experienced a decline in illicit drug exposure in 2003.
- Most *alcohol, tobacco, and other drug offers* are from friends. More than half of the seniors have been offered alcohol and tobacco by their friends, and nearly half of them have been offered illicit drugs by their friends. Relatives, other than parents and siblings, are the second most common source of alcohol offers. Strangers are the second most common source of tobacco and illicit drug offers. A large proportion of students have been offered alcohol from parents, siblings, or other relatives, with the *ability to resist* offers from family members more difficult than the ability to resist offers from friends and strangers. The majority of students reported that they have always refused offers by strangers for tobacco, alcohol, and other drugs. More students turn down tobacco offers than alcohol and illicit drug offers. Younger students are generally more likely to resist offers to use substances than older students.
- In 2003, *perceived availability* of illicit drugs decreased for each of the illicit drugs among students in grades 8 and 10; and dropped for marijuana, hallucinogens, and ecstasy in grade 12. In grade 6, perceived availability for all illicit drugs, except marijuana, remained relatively stable; marijuana availability perceptions are currently down in grade 6. Perceived availability of alcohol and cigarettes has been basically declining over the years and dropped substantially across all grades in 2003. The decreases in availability perceptions for marijuana, hallucinogens, ecstasy, alcohol, and cigarettes coincide with substantial decreases in prevalence reports for use of these substances in 2003. Students in Hawaii see alcohol, tobacco, and illicit drugs as less obtainable than students nationwide.

FIGURE 12
Perceived Availability of Various Substances (Nationwide vs. Hawaii), by Grade, 2003
 (Entries are percentages %)



FINDINGS: Students in Hawaii view alcohol, cigarettes, and most illicit drugs as less obtainable than students nationwide. The exception is methamphetamine, where the same proportion of 10th and 12th graders in Hawaii as nationwide view the drug as fairly easy to obtain.

- In 1997, the State of Hawaii initiated several tobacco “stings” in an effort to decrease merchant sales of cigarettes to minors. In March of 2000, a series of alcohol “stings” were initiated. The efforts have been paying off, with the reported ability to ***purchase alcohol and tobacco*** decreasing drastically over the years. In 2003, ability to purchase alcohol stabilized at 1% and 4% in grades 6 and 8, but decreased to 8% and 15% in grades 10 and 12. Ability to purchase tobacco stabilized at 1% in grade 6, but decreased to 3%, 7%, and 13% in grades 8, 10, and 12. The percentages of students reporting that they are able to buy alcohol or tobacco in 2003 are equivalent to record lows in the lower grades, but are below record lows in the upper grades. The primary source of both alcohol and tobacco purchases is from a store employee; however, the percentages able to buy alcohol or tobacco from a store employee have been consistently declining over the years – particularly among the upper grade students.
- Incidence of substance use has been consistently higher among certain subgroups. Students from different ***ethnic backgrounds*** exhibit different patterns of alcohol, tobacco, and other drug use. Native Hawaiian and White students report the highest substance use; Chinese students report the lowest. ***Sex differences*** are most notable in the upper grades. Over the years, lifetime prevalence reports for illicit drug use in the upper grades have been higher among males than females, and lifetime prevalence reports for alcohol and cigarette use have been highest among females. In 2003, lifetime alcohol and cigarette prevalence reports remain highest among females; illicit drug use, however, is no longer consistently higher among males than females in the upper grades.
- Twenty-four risk factors and ten protective factors that are characteristic of the community, family, school environments, and the students and their peer groups were used in the current study to create ***risk and protective factor community profiles***. Risk factors predict increased likelihood of drug use, delinquency, and violent behaviors, whereas protective factors exert a positive influence or buffer the negative influence of risk, thus reducing the likelihood that adolescents will engage in problem behaviors. The study’s findings related to specific school, community, and subgroup profiles are not covered in the executive summary report because they are too complex in nature to be briefly summarized. The reader, however, is encouraged to obtain profile reports related to their community or subgroup of interest prior to implementing prevention efforts directed at reducing substance use and other antisocial behaviors in a specific community. Profile reports are located on the web (www.hawaii.gov/health/substance-abuse/prevention-treatment/survey/report2003).
- ***Annual Antisocial Behavior (ASB) prevalence rates*** are 15% or less for all ASBs, except for reports of being drunk or high at school. Nearly 1 out of 5 students in grades 10 (17%) and 12 (19%) reported that they were drunk or high at school at least once in the past year, and 11% of the seniors reported having engaged in this behavior three or more times in the past year. Nearly one tenth of the seniors (9%) reported having sold illegal drugs in the past year and nearly one tenth of the students in all grades reported having attacked someone with the intent of seriously hurting them. Very few students (4% or less) reported carrying a handgun, taking a handgun to school, or attempted to steal a vehicle. Annual prevalence rates for having at least one best friend who has engaged in various ASBs are four times as high as self-reported engagement of ASBs. In grades 10 and 12, over one third of the students reported having a best friend who has sold illegal drugs.

FIGURE 13
Trends in Ability to Purchase Alcohol and Tobacco
as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

(Entries are percentages %)

Figure 13a: Alcohol From a **Store Employee**

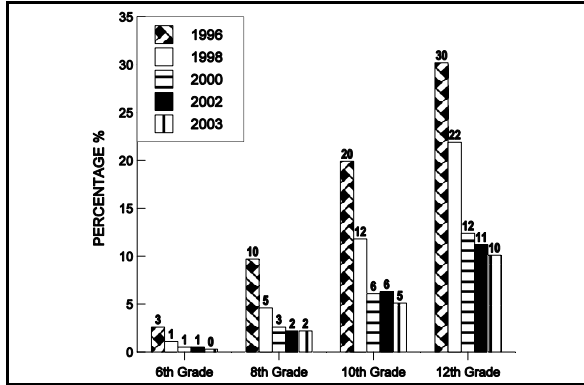


Figure 13b: Tobacco From a **Store Employee**

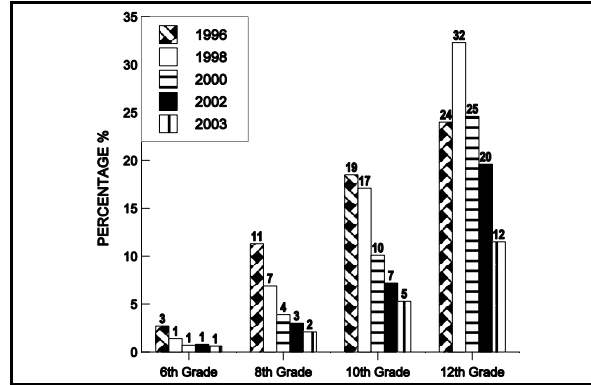


Figure 13c: Alcohol From a **Bar**

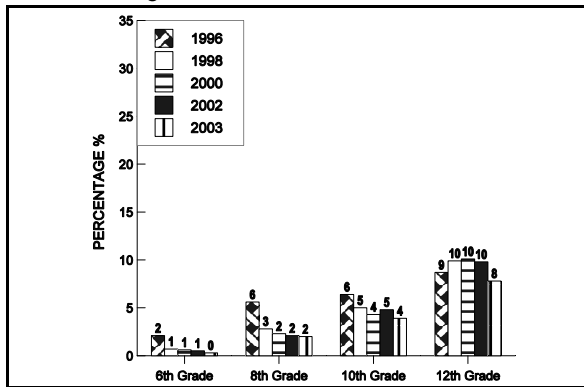


Figure 13d: Tobacco From a **Bar**

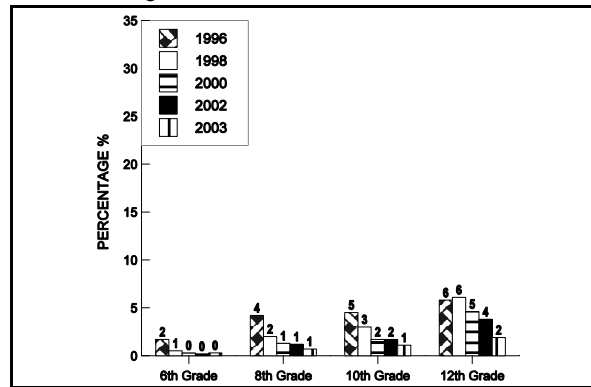


Figure 13e: Alcohol From a **Restaurant**

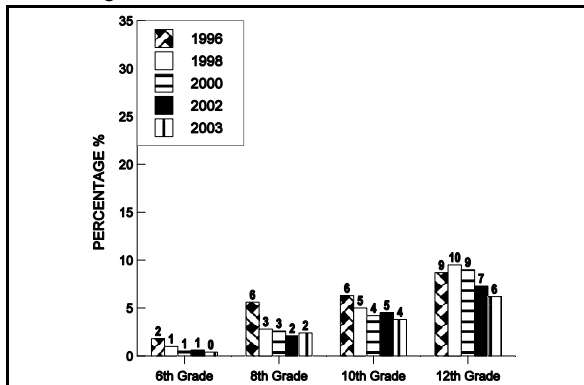
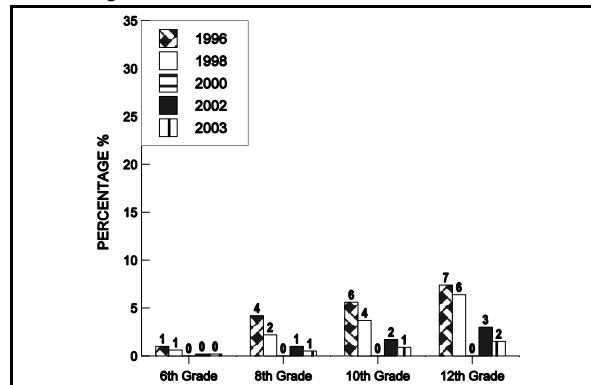


Figure 13f: Tobacco From a **Restaurant**



FINDINGS: The State of Hawaii initiated several tobacco “stings” in 1997; alcohol stings were initiated a few years after. Overall reported ability to purchase alcohol and tobacco in 2003 is much lower than in 1996. The primary source of both alcohol and tobacco purchases is from a store employee; however, the percentages able to buy alcohol or tobacco from a store employee in 2003 have decreased in most grades.

- Scholars over the years have argued that substance use and other ASBs are a function of the accumulation of multiple risk factors and multiple protective factors. The greater the number of risk factors to which an individual is exposed, the greater likelihood that he or she will use or abuse substances. The greater the number of protective factors to which an individual is exposed, the greater the likelihood that he or she will abstain from substance use. Examining the *risk and protective factor indexes* is an important starting point for determining which communities are in greatest need of prevention services.
- **Comparisons across counties** on the risk factor index (i.e., the number of risk factors) show that a greater percentage of students in Hawaii County (24%) than in the City & County of Honolulu (15%), and Kauai (14%) and Maui Counties (20%) are exposed to a high number of risk factors. This is consistent with 2000 reports where Hawaii County had the highest proportion of students with elevated risk. Back in 2002, the City & County of Honolulu had the highest proportion of students with elevated risk, which corresponded with rising prevalence rates in 2002 for the City & County of Honolulu. County differences on the protective factor index also show Hawaii County students as most vulnerable; only 24% of Hawaii County students have high protection (exposed to 7 or more protective factors), compared to 26% in the City & County of Honolulu and Maui County, and 31% in Kauai County.
- **Comparisons across public school districts** on the risk factor index show that Hawaii and Windward Districts have a greater proportion of students who are exposed to a high number of risk factors than other districts. Hawaii District has the largest proportion of students with elevated risk on the risk factor index (24%), followed by Windward District (21%), Maui District (19%), Leeward District (17%), Kauai and Central Districts (15% each), and Honolulu District (14%). District differences on the protective factor index are less extreme, but show that Leeward District, followed by Hawaii and Honolulu Districts have the smallest proportion of students with high protection.
- **Comparisons among males and females** show that a greater proportion of males than females are exposed to a high number of risk factors and a low number of protective factors. **Comparisons across ethnic groups** show that larger proportions of Native Hawaiian and White students than students from other ethnic groups are exposed to a high number of risk factors. Nearly twice as many Native Hawaiians and Whites (22% each) than Filipinos (14%) are exposed to a high number or risk factors; differences are more pronounced when comparing these groups to Chinese (7%) and Japanese (9%). Ethnic differences are minimal on the protective factor index.
- Understanding **which risk and protective factors to address** in various communities involves examining which risk factors are above the statewide percentages and which protective factors are below the statewide percentages. The comparison to the statewide percentages provides information in determining the relative importance of each risk or protective factor level for the specific subgroup. Prevention efforts should move toward reducing elevated risk factors or enhancing low protective factors. Profiles developed from the study illustrate where prevention efforts should be prioritized in various communities and subgroups. Table 16 summarizes the county and district profiles, and Table 17 summarizes the sex and ethnicity profiles. These tables identify problematic risk factors and problematic protective factors in 2000, 2002, and 2003. Prevention efforts need to focus on factors that remain or have become problematic in 2003.

SECTION V – CONCLUSION AND RECOMMENDATIONS

The results of the *2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study* show substance use is on the decline, but continues to be a significant problem affecting the youth of Hawaii. By the time students become seniors nearly half have tried an illicit drug (47%) or cigarettes (45%), and nearly three quarters (73%) have tried alcohol. At least 1 out of 20 seniors has tried an illicit drug other than marijuana. In the middle schools, over one third of the 8th graders have tried alcohol (37%), nearly one fourth have tried cigarettes (23%), and at least one tenth have tried marijuana (12%). Although the current report illustrates that substance use is clearly on the decline in Hawaii, we are nowhere near the point of being able to stop the war on drugs. Many of the illicit drugs have been on the decline for a number of years in Hawaii, only to be replaced in popularity at various points in time by new drugs. For instance, while other illicit drugs declined in 2000 and 2002, reports of ecstasy use continued to rise until 2003. In 2003, prevalence reports for ecstasy finally dropped, along with marijuana, methamphetamine, and hallucinogens. Most other illicit drugs decreased slightly or remained unchanged.

Alcohol remains the most prevalent substance used by adolescents, but alcohol prevalence rates among Hawaii students in 2003 are at record low levels. Prevalence reports for cigarette use among Hawaii students started on a downward trajectory in 1998 and have continued on that course through 2003. Hawaii typically follows nationwide trends and 2003 is no exception. Prevalence rates in Hawaii for alcohol, tobacco, and illicit drugs, however, continue to be lower than nationwide prevalence rates.

The estimated number of adolescents needing treatment in the State of Hawaii has also been declining. Total estimated treatment needs for students in grades 6 through 12 statewide were 16% in 1998, dropped to 13% in 2000, 11% in 2002, and down to 7% in 2003. Treatment needs continue to be the highest among students in Hawaii and Maui Counties, where 10% are estimated to need treatment in 2003. More students in need of treatment are seeking out treatment, with the proportion of students reporting that they have utilized a treatment facility in 2003 nearly twice as high as reported in 2002.

The risk and protective factor framework utilized in the current study highlights that prevention needs are unique to each community and each subgroup. Prevention efforts directed at key risk and protective factors have been shown to have a significant impact on adolescent substance use. Reduction of alcohol and tobacco sales to minors following state-initiated alcohol and tobacco “stings” is a key example of prevention efforts working. Not only have sales to minors dropped since these stings were initiated, but alcohol and tobacco use rates among adolescents declined as well. In sum, declining substance use rates and declining treatment needs can continue in the State of Hawaii as long as prevention efforts are directed at reducing elevated risk factors and promoting protective factors.

RECOMMENDATIONS

Although the survey was conducted in a school setting, an examination of factors related to adolescent substance use and abuse show that effective prevention and treatment programs must extend well beyond the school campus. Effective prevention and treatment programs require the combined efforts of communities, law enforcement, families, media, and ongoing school-based substance abuse programs. The Hawaii Department of Health, Alcohol and Drug Abuse Division (ADAD), makes the following recommendations based on the findings from *The 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Study (1987-2003)*; *Adolescent Prevention and Treatment Needs Assessment* (Pearson, 2004).

- **MAKE SUBSTANCE ABUSE PREVENTION A PRIORITY IN EVERY COMMUNITY.** Research has shown that prevention plans that take into account community-level risk and protective factors have the greatest potential for successfully decreasing the rates of youth substance abuse. Perceived availability of substances and exposure to people using substances are critical risk factors in substance use and abuse. Thus, community efforts to reduce availability through voluntary efforts by merchants and through community enforcement of merchant compliance with Federal and State laws prohibiting sales of alcohol and tobacco products to minors must be continued and increased. Tightening of local ordinances restricting drinking and cigarette smoking in public settings is needed to decrease exposure to substance abuse.
- **STRENGTHEN THE FAMILY'S ROLE AND SKILLS IN SUBSTANCE ABUSE PREVENTION EFFORTS.** Parents and family members must recognize that exposure to substance use by family members puts children and adolescents at great risk for substance use and abuse. Parents' expressed disapproval of substance use is a powerful deterrent against substance use and abuse by children. The risk and protective factors addressed in this study suggest that parents need to take an active role in their children's lives, including talking to them about the dangers of substance use, monitoring their activities, understanding their problems, and being prepared to support their need to receive treatment for substance abuse.
- **ENSURE THAT EVERY ADOLESCENT WHO HAS SUBSTANCE ABUSE OR DEPENDENCE PROBLEMS GETS TREATMENT.** Although substance abuse is a community problem, school-based treatment programs make treatment easily accessible to youths who need treatment. Accessible school-based substance treatment programs should be sustained and expanded to all high schools and intermediate schools. Material about substance abuse treatment and counseling programs must be distributed more widely in schools and must thoroughly emphasize the fact that these services are strictly confidential.

- **INCREASE MASS MEDIA COVERAGE ON SUBSTANCE ABUSE PREVENTION AND TREATMENT.** Community efforts must include extensive mass media coverage designed to alter the myth that substance use is normative behavior (e.g., “everyone is using substances”), to educate parents regarding their critical role in substance use prevention and treatment, to teach parents skills for better family communication, and to increase public awareness regarding substance abuse symptoms and treatment programs. Components of a comprehensive media campaign could include television public service announcements, featured news stories, and radio programming. Additionally, distribution of printed material in workplaces, physicians’ offices, and health care agencies could be used to increase public awareness and to teach community members skills they could use to modify their substance use behaviors and behaviors of others.
- **INCREASE COMMUNITY AWARENESS OF THE SERIOUS CONSEQUENCES OF UNDERAGE ALCOHOL USAGE.** Communities need to employ effective strategies designed to decrease underage alcohol usage. Underage alcohol usage initiatives should include limiting access to alcohol through stricter enforcement of laws and regulations designed to prohibit alcohol use by minors and by providing prevention and education activities that deter youth alcohol usage in schools and within communities. Media and public relation efforts need to raise awareness of the problems and solutions to underage drinking.
- **STRENGTHEN SUBSTANCE ABUSE PREVENTION PROGRAMS IN THE SCHOOL AND THE COMMUNITY.** A comprehensive substance abuse prevention program must begin no later than the fourth grade and continue through high school. Prevention efforts should target identified risk and protective factors and convey the important message that the majority of students are not using alcohol, tobacco, or drugs. School-based prevention programs must be augmented by community-based approaches serving young people after school and by parenting programs, particularly for parents of young adolescents and for high-risk families. All school and community-based prevention efforts should address identified risk and protective factors and should use proven, science-based curricula and approaches.

APPENDIX A PREVALENCE TABLES

Table 1: Trends in Lifetime Prevalence of Various Substances for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003.

Table 1 lists the percentage of students, in each grade, using various substances at least once in their lifetimes and represents the proportion of students who have experimented with various substances. The table provides Hawaii lifetime prevalence trend data from 1987 to 2003 and records the percentage-point change in lifetime prevalence reports from 2002 to 2003.

Table 2: Trends in Monthly (30-Day) Prevalence of Various Substances for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003.

Table 2 lists the percentage of students, in each grade, using various substances at least once in the past 30 days and represents the proportion of students who are currently using various substances. The table provides Hawaii monthly prevalence trend data from 1987 to 2003 and records the percentage-point change in monthly prevalence reports from 2002 to 2003.

Table 3: Trends in Daily Prevalence of Various Substances for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003.

Table 3 lists the percentage of students, in each grade, using various substances on 20 or more occasions in the past 30 days and represents the proportion of students who are using various substances on a daily or near-daily basis. Daily substance use was first assessed in 1996. The table provides data from 1996 to 2003 and records the percentage-point change in prevalence reports from 2002 to 2003.

Table 4: A Comparison of Nationwide versus Hawaii Substance Usage Rates, by Grade, 2003.

Table 4 displays data from the 2003 Hawaii Student Alcohol, Tobacco, and Other Drug Use Survey and the national comparison data from the 2003 Monitoring the Future Survey. The table provides lifetime, monthly, and daily prevalence data across each grade level for each substance. The national Monitoring the Future Study does not survey students in grade 6; thus, national comparison data for students in grade 6 are not provided.

TABLE 1
Trends in Lifetime Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Any Illicit Drug, Including Inhalants ^a										
6th Grade	14.4	11.5	9.2	12.4	13.4	13.7	8.3	9.5	7.5	-2.0
8th Grade	27.1	22.3	21.6	27.3	29.6	26.3	23.3	22.0	19.2	-2.8
10th Grade	38.7	33.3	33.5	38.7	41.3	42.9	36.9	40.4	35.1	-5.3
12th Grade	50.5	41.4	39.3	42.0	47.7	50.3	48.4	49.4	46.9	-2.5
Any Illicit Drug, Excluding Inhalants ^b										
6th Grade	—	—	—	—	6.4	6.6	4.2	5.2	4.3	-0.9
8th Grade	—	—	—	—	23.0	20.9	18.5	18.2	14.3	-3.9
10th Grade	—	—	—	—	37.8	40.7	35.2	38.6	32.7	-5.9
12th Grade	—	—	—	—	45.9	48.9	47.8	48.5	46.1	-2.4
Marijuana										
6th Grade	3.0	2.5	1.7	2.4	5.1	4.9	2.4	2.6	1.5	-1.1
8th Grade	16.5	13.1	12.3	16.7	21.5	19.2	15.9	15.9	12.1	-3.8
10th Grade	32.9	26.2	25.7	31.4	36.5	39.2	33.2	35.8	30.5	-5.3
12th Grade	46.0	36.2	34.3	37.1	44.7	47.7	45.8	46.2	44.4	-1.8
Inhalants										
6th Grade	10.6	8.7	7.2	9.4	9.7	10.1	5.3	5.6	4.2	-1.4
8th Grade	14.9	13.0	12.7	16.6	15.2	12.5	9.9	9.1	9.0	-0.1
10th Grade	13.4	12.8	14.2	15.6	11.2	10.2	7.0	8.4	7.9	-0.5
12th Grade	11.5	11.2	10.2	12.0	7.9	8.1	5.7	7.3	8.8	+1.5
Cocaine										
6th Grade	0.8	0.8	0.7	1.0	1.9	2.0	0.4	0.4	0.5	+0.1
8th Grade	3.8	4.3	3.4	4.0	5.3	4.2	2.2	2.1	1.2	-0.9
10th Grade	8.0	7.7	6.4	7.2	5.8	5.3	3.5	3.1	3.0	-0.1
12th Grade	14.8	10.5	9.1	8.2	7.9	6.0	5.8	4.5	4.5	0.0
Methamphetamine										
6th Grade	—	1.4	1.0	1.3	1.4	1.8	0.5	0.4	0.2	-0.2
8th Grade	—	6.1	4.3	4.9	4.4	4.6	2.3	2.0	0.9	-1.1
10th Grade	—	9.9	7.0	7.8	5.9	6.7	4.5	4.2	2.7	-1.5
12th Grade	—	11.7	8.9	8.4	7.5	7.7	5.8	5.3	4.2	-1.1

(Table continued on next page)

TABLE 1 (continued)
Trends in Lifetime Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Heroin or Other Opiates										
6th Grade	1.0	0.9	0.6	0.8	1.3	1.4	0.2	0.3	0.2	-0.1
8th Grade	3.3	2.6	2.4	2.7	3.4	2.7	1.2	1.0	0.7	-0.3
10th Grade	4.4	4.2	4.1	4.1	1.9	2.3	1.3	1.3	1.1	-0.2
12th Grade	6.0	5.1	4.6	5.1	2.7	2.0	1.8	1.4	1.7	+0.3
Sedatives/Tranquilizers										
6th Grade	1.3	0.7	0.8	0.9	1.4	1.6	0.4	0.5	0.6	+0.1
8th Grade	2.7	2.8	2.5	2.7	3.6	3.0	1.8	1.9	1.2	-0.7
10th Grade	4.7	4.1	4.2	4.0	3.9	3.9	3.2	4.5	3.1	-1.4
12th Grade	6.3	4.5	4.2	4.3	4.8	3.9	3.8	5.8	5.4	-0.4
Hallucinogens										
6th Grade	0.9	1.0	0.8	1.2	1.6	1.9	0.4	0.4	0.3	-0.1
8th Grade	3.4	4.1	3.5	4.5	6.5	4.6	2.9	2.5	1.1	-1.4
10th Grade	6.3	6.6	7.1	9.1	7.8	9.2	6.4	5.6	3.3	-2.3
12th Grade	8.3	7.9	8.6	10.8	12.0	11.6	9.9	9.1	6.5	-2.6
Steroids										
6th Grade	3.3	2.2	2.2	1.9	1.5	2.0	1.3	2.0	1.6	-0.4
8th Grade	5.4	4.0	3.1	3.1	2.8	2.6	2.2	2.1	1.8	-0.3
10th Grade	4.8	4.1	3.8	3.7	2.2	2.1	1.7	2.6	2.2	-0.4
12th Grade	4.5	4.4	3.5	3.3	2.4	1.6	1.8	2.8	2.4	-0.4
Ecstasy/MDMA										
6th Grade	—	—	—	—	—	1.4	0.1	0.2	0.2	0.0
8th Grade	—	—	—	—	—	2.9	2.0	3.0	1.1	-1.9
10th Grade	—	—	—	—	—	4.1	5.3	7.2	3.5	-3.7
12th Grade	—	—	—	—	—	5.3	8.4	10.6	6.4	-4.2
GHB										
6th Grade	—	—	—	—	—	—	—	0.1	0.2	+0.1
8th Grade	—	—	—	—	—	—	—	1.4	0.6	-0.8
10th Grade	—	—	—	—	—	—	—	2.0	1.1	-0.9
12th Grade	—	—	—	—	—	—	—	2.6	1.2	-1.4
Rohypnol										
6th Grade	—	—	—	—	—	—	—	0.2	0.1	-0.1
8th Grade	—	—	—	—	—	—	—	0.9	0.5	-0.4
10th Grade	—	—	—	—	—	—	—	1.3	0.8	-0.5
12th Grade	—	—	—	—	—	—	—	0.9	0.8	-0.1

(Table continued on next page)

TABLE 1 (continued)
Trends in Lifetime Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Ketamine										
6th Grade	—	—	—	—	—	—	—	0.2	0.4	+0.2
8th Grade	—	—	—	—	—	—	—	0.8	0.8	0.0
10th Grade	—	—	—	—	—	—	—	1.4	0.6	-0.8
12th Grade	—	—	—	—	—	—	—	1.7	1.3	-0.4
Alcohol^c										
6th Grade	47.6	34.6	31.1	34.9	29.8	31.6	24.2	20.0	13.2	-6.8
8th Grade	64.7	57.3	55.8	57.4	54.0	52.6	49.2	42.5	36.8	-5.7
10th Grade	76.1	71.1	72.9	73.3	73.4	72.3	67.1	64.7	59.1	-5.6
12th Grade	85.9	80.5	79.8	79.2	79.7	81.2	77.2	75.4	72.5	-2.9
Been Drunk										
6th Grade	—	—	—	—	5.6	5.8	2.9	3.3	2.0	-1.3
8th Grade	—	—	—	—	22.9	20.4	17.3	17.1	13.4	-3.7
10th Grade	—	—	—	—	40.1	40.7	37.5	37.8	33.4	-4.4
12th Grade	—	—	—	—	52.2	55.4	53.0	53.5	51.6	-1.9
Any Tobacco Use										
6th Grade	—	—	—	—	24.2	22.2	12.7	10.5	7.2	-3.3
8th Grade	—	—	—	—	46.6	44.1	37.2	28.2	23.1	-5.1
10th Grade	—	—	—	—	58.4	58.0	50.5	43.2	36.7	-6.5
12th Grade	—	—	—	—	64.7	63.6	60.0	50.5	46.1	-4.4
Cigarettes										
6th Grade	7.3	11.6	9.6	12.6	23.6	21.5	12.2	9.9	6.7	-3.2
8th Grade	26.4	32.5	33.2	37.4	45.9	43.1	36.3	27.6	22.5	-5.1
10th Grade	38.9	43.3	45.6	49.3	57.4	57.0	49.5	42.1	35.9	-6.2
12th Grade	48.2	49.5	49.6	50.7	62.7	62.4	58.8	49.4	45.3	-4.1
Smokeless Tobacco										
6th Grade	3.2	2.8	2.8	3.1	3.5	3.1	1.2	1.3	0.9	-0.4
8th Grade	8.2	6.2	6.8	7.1	8.1	5.9	3.6	3.5	3.0	-0.5
10th Grade	13.3	10.5	10.0	10.1	10.6	10.2	5.3	5.9	4.4	-1.5
12th Grade	17.5	14.4	13.7	13.0	16.8	15.9	10.0	8.0	7.5	-0.5

Approximate Weighted Ns for 2003: 6th grade = 16,649; 8th grade = 17,127; 10th grade = 15,921; 12th grade = 12,824.

NOTES: ‘ — ’ indicates data not available. *Lifetime Prevalence* is defined as use of a substance at least once in a student’s lifetime.

^a *Any Illicit Drug, Including Inhalants* includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^b *Any Illicit Drug, Excluding Inhalants* includes the use of marijuana, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^c Students were asked if they had tried beer or wine – “more than a few sips,” or hard liquor.

TABLE 2
Trends in Monthly (30-Day) Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Any Illicit Drug, Including Inhalants ^a										
6th Grade	1.7	1.8	1.5	2.1	7.7	6.7	4.2	5.0	3.8	-1.2
8th Grade	7.7	8.2	7.4	10.5	18.4	14.7	11.8	11.9	10.2	-1.7
10th Grade	14.3	14.2	14.7	18.6	22.7	23.6	19.0	20.7	16.6	-4.1
12th Grade	19.6	17.1	16.5	19.7	26.3	24.5	24.7	23.1	19.8	-3.3
Any Illicit Drug, Excluding Inhalants ^b										
6th Grade	—	—	—	—	4.3	3.7	2.4	2.7	2.2	-0.5
8th Grade	—	—	—	—	15.7	13.0	10.3	10.5	8.0	-2.5
10th Grade	—	—	—	—	22.0	23.3	18.6	20.0	15.9	-4.1
12th Grade	—	—	—	—	25.9	24.3	24.5	22.9	19.6	-3.3
Marijuana										
6th Grade	0.4	0.6	0.4	0.5	3.4	2.6	1.3	1.3	1.0	-0.3
8th Grade	5.2	4.9	4.9	7.5	14.8	11.8	8.9	9.1	6.6	-2.5
10th Grade	12.4	11.1	12.7	16.0	21.2	22.3	17.2	18.4	14.8	-3.6
12th Grade	17.2	13.9	14.6	17.9	25.0	23.0	22.7	21.1	18.4	-2.7
Inhalants										
6th Grade	1.0	0.9	0.9	1.3	5.1	4.5	2.4	2.8	1.9	-0.9
8th Grade	2.7	3.4	2.6	3.7	7.2	4.8	3.2	3.4	3.6	+0.2
10th Grade	2.3	3.0	2.8	3.0	3.1	2.4	1.5	2.2	2.0	-0.2
12th Grade	1.8	2.5	1.8	2.1	2.4	1.4	0.8	1.3	1.3	0.0
Cocaine										
6th Grade	0.3	0.3	0.2	0.3	1.3	1.3	0.4	0.4	0.4	0.0
8th Grade	1.4	1.7	1.3	1.6	3.4	2.6	1.2	1.3	0.7	-0.6
10th Grade	2.7	3.0	2.4	2.7	2.7	2.3	1.3	1.2	0.9	-0.3
12th Grade	4.8	3.8	3.5	2.4	3.6	1.8	1.5	1.3	1.5	+0.2
Methamphetamine										
6th Grade	—	0.4	0.2	0.3	1.0	1.0	0.3	0.2	0.2	0.0
8th Grade	—	2.7	1.6	1.9	3.0	3.1	1.1	1.2	0.8	-0.4
10th Grade	—	4.8	2.9	3.2	2.8	3.0	1.6	1.8	1.2	-0.6
12th Grade	—	5.5	3.4	3.1	2.8	2.3	1.6	1.8	0.8	-1.0
Heroin or Other Opiates										
6th Grade	0.2	0.2	0.1	0.2	1.0	0.8	0.1	0.1	0.1	0.0
8th Grade	0.9	0.9	1.0	1.0	2.4	1.8	0.8	0.7	0.5	-0.2
10th Grade	1.5	1.5	1.3	1.5	1.4	1.4	0.5	0.7	0.6	-0.1
12th Grade	1.5	1.5	1.4	1.4	1.7	0.7	0.5	0.4	0.3	-0.1

(Table continued on next page)

TABLE 2 (continued)
Trends in Monthly (30-Day) Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Sedatives/Tranquilizers										
6th Grade	0.2	0.3	0.3	0.3	0.9	0.7	0.2	0.1	0.3	+0.2
8th Grade	0.9	1.1	1.1	0.9	2.5	2.1	1.0	0.9	0.6	-0.3
10th Grade	1.4	1.5	1.1	1.5	1.9	1.7	1.2	1.7	1.0	-0.7
12th Grade	1.3	1.3	1.0	0.9	2.0	1.6	1.6	1.8	1.0	-0.8
Hallucinogens										
6th Grade	0.2	0.3	0.2	0.4	1.0	0.9	0.3	0.2	0.2	0.0
8th Grade	1.0	1.6	1.3	1.5	4.2	2.8	1.4	1.3	0.7	-0.6
10th Grade	1.9	2.8	2.9	3.4	4.3	3.6	2.2	1.8	1.0	-0.8
12th Grade	2.2	2.6	2.8	3.5	5.3	3.1	2.0	1.7	1.1	-0.6
Steroids										
6th Grade	0.8	0.5	0.6	0.5	1.0	1.1	0.8	0.9	0.8	-0.1
8th Grade	2.0	1.5	1.4	1.1	2.2	1.8	1.3	1.3	1.0	-0.3
10th Grade	1.9	1.8	1.7	1.9	1.4	1.3	1.0	1.2	1.1	-0.1
12th Grade	1.8	2.0	1.2	1.7	1.7	1.0	0.9	1.1	0.8	-0.3
Ecstasy/MDMA										
6th Grade	—	—	—	—	—	0.7	0.1	0.1	0.2	+0.1
8th Grade	—	—	—	—	—	2.0	1.3	1.7	0.9	-0.8
10th Grade	—	—	—	—	—	1.9	2.9	2.3	1.1	-1.2
12th Grade	—	—	—	—	—	1.7	3.9	2.5	0.8	-1.7
GHB										
6th Grade	—	—	—	—	—	—	—	0.1	0.3	+0.2
8th Grade	—	—	—	—	—	—	—	1.0	0.5	-0.5
10th Grade	—	—	—	—	—	—	—	1.0	0.7	-0.3
12th Grade	—	—	—	—	—	—	—	0.8	0.2	-0.6
Rohypnol										
6th Grade	—	—	—	—	—	—	—	0.2	0.4	+0.2
8th Grade	—	—	—	—	—	—	—	0.8	0.4	-0.4
10th Grade	—	—	—	—	—	—	—	0.6	0.5	-0.1
12th Grade	—	—	—	—	—	—	—	0.4	0.3	-0.1
Ketamine										
6th Grade	—	—	—	—	—	—	—	0.1	0.4	+0.3
8th Grade	—	—	—	—	—	—	—	0.7	0.6	-0.1
10th Grade	—	—	—	—	—	—	—	0.8	0.5	-0.3
12th Grade	—	—	—	—	—	—	—	0.6	0.4	-0.2

(Table continued on next page)

TABLE 2 (continued)
Trends in Monthly (30-Day) Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1987-2003

(Entries are percentages %)

	1987	1989	1991	1993	1996	1998	2000	2002	2003	2002-2003 change
Alcohol ^c										
6th Grade	3.2	3.1	2.8	2.5	14.4	12.0	9.1	7.8	3.9	-3.9
8th Grade	14.0	13.2	14.0	15.2	30.2	25.3	22.1	20.4	14.6	-5.8
10th Grade	28.0	27.1	28.3	28.8	41.2	37.6	32.5	33.9	27.0	-6.9
12th Grade	42.7	37.8	38.6	35.4	46.3	45.0	43.2	43.0	36.3	-6.7
Any Tobacco Use										
6th Grade	—	—	—	—	11.2	8.6	4.0	3.9	2.9	-1.0
8th Grade	—	—	—	—	26.1	19.1	12.5	10.2	9.0	-1.2
10th Grade	—	—	—	—	26.7	24.9	17.1	14.2	11.6	-2.6
12th Grade	—	—	—	—	28.9	29.7	23.4	19.0	17.0	-2.0
Cigarettes										
6th Grade	0.8	1.6	1.5	2.1	10.8	8.1	3.8	3.6	2.6	-1.0
8th Grade	7.9	10.1	11.3	14.3	25.5	18.7	12.1	9.7	8.5	-1.2
10th Grade	16.4	17.5	19.7	22.2	25.8	24.1	16.6	13.5	11.3	-2.2
12th Grade	22.4	21.5	22.1	23.0	27.9	28.9	22.6	18.1	16.3	-1.8
Smokeless Tobacco										
6th Grade	0.4	0.4	0.5	0.5	1.9	1.5	0.5	0.6	0.6	0.0
8th Grade	1.0	1.5	1.7	2.0	4.5	2.9	1.5	1.5	1.4	-0.1
10th Grade	2.1	2.6	2.7	2.8	3.7	3.0	1.4	1.8	0.9	-0.9
12th Grade	3.8	3.3	3.5	3.6	5.2	3.1	2.0	2.2	1.6	-0.6

Approximate Weighted Ns for 2003: 6th grade = 16,649; 8th grade = 17,127; 10th grade = 15,921; 12th grade = 12,824.

NOTES: ‘ — ’ indicates data not available. *Monthly (30-Day) Prevalence* is defined as use of a substance at least once in the past 30 days.

^a *Any Illicit Drug, Including Inhalants* includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^b *Any Illicit Drug, Excluding Inhalants* includes the use of marijuana, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^c Students were asked if they had tried beer or wine – “more than a few sips,” or hard liquor.

TABLE 3
Trends in Daily Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

(Entries are percentages %)

	1996	1998	2000	2002	2003	2002-2003 change
Any Illicit Drug, Including Inhalants ^a						
6th Grade	1.2	1.0	0.5	0.5	0.4	-0.1
8th Grade	4.0	3.4	2.0	2.2	1.5	-0.7
10th Grade	5.2	5.3	4.0	4.9	3.3	-1.6
12th Grade	7.3	5.7	5.1	5.4	4.8	-0.6
Any Illicit Drug, Excluding Inhalants ^b						
6th Grade	0.8	0.7	0.4	0.3	0.3	0.0
8th Grade	3.6	3.1	1.9	2.1	1.3	-0.8
10th Grade	4.9	5.2	4.0	4.8	3.3	-1.5
12th Grade	6.7	5.7	5.1	5.4	4.7	-0.7
Marijuana						
6th Grade	0.7	0.4	0.2	0.2	0.1	-0.1
8th Grade	3.1	2.4	1.5	1.6	1.0	-0.6
10th Grade	4.2	4.7	3.4	4.4	3.0	-1.4
12th Grade	6.4	5.2	4.6	4.8	4.4	-0.4
Inhalants						
6th Grade	0.5	0.5	0.2	0.2	0.1	-0.1
8th Grade	1.3	0.7	0.3	0.3	0.3	0.0
10th Grade	0.7	0.6	0.1	0.2	0.3	+0.1
12th Grade	0.6	0.3	0.1	0.2	0.1	-0.1
Cocaine						
6th Grade	0.4	0.2	0.1	0.0	0.1	+0.1
8th Grade	1.1	0.6	0.2	0.1	0.0	-0.1
10th Grade	0.8	0.6	0.1	0.2	0.2	0.0
12th Grade	0.9	0.1	0.2	0.2	0.2	0.0
Methamphetamine						
6th Grade	0.2	0.1	0.0	0.1	0.0	-0.1
8th Grade	0.9	0.5	0.1	0.1	0.0	-0.1
10th Grade	0.8	0.6	0.3	0.2	0.2	0.0
12th Grade	0.6	0.4	0.3	0.3	0.1	-0.2
Heroin or Other Opiates						
6th Grade	0.3	0.1	0.0	0.0	0.0	0.0
8th Grade	0.9	0.4	0.1	0.0	0.0	0.0
10th Grade	0.7	0.4	0.1	0.1	0.2	+0.1
12th Grade	0.6	0.1	0.2	0.1	0.1	0.0

(Table continued on next page)

TABLE 3 (continued)
Trends in Daily Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

(Entries are percentages %)

	1996	1998	2000	2002	2003	2002-2003 change
Sedatives/Tranquilizers						
6th Grade	0.3	0.2	0.0	0.0	0.0	0.0
8th Grade	0.9	0.4	0.1	0.1	0.1	0.0
10th Grade	0.7	0.4	0.2	0.2	0.3	+0.1
12th Grade	0.6	0.2	0.2	0.2	0.1	-0.1
Hallucinogens						
6th Grade	0.3	0.1	0.0	0.0	0.0	0.0
8th Grade	1.1	0.5	0.2	0.1	0.1	0.0
10th Grade	0.6	0.6	0.3	0.1	0.3	+0.2
12th Grade	0.8	0.3	0.3	0.2	0.1	-0.1
Steroids						
6th Grade	0.3	0.3	0.1	0.1	0.0	-0.1
8th Grade	1.0	0.4	0.2	0.2	0.1	-0.1
10th Grade	0.7	0.4	0.2	0.2	0.2	0.0
12th Grade	0.7	0.3	0.2	0.3	0.1	-0.2
Ecstasy/MDMA						
6th Grade	—	0.1	0.0	0.0	0.0	0.0
8th Grade	—	0.5	0.1	0.2	0.0	-0.2
10th Grade	—	0.5	0.2	0.2	0.3	+0.1
12th Grade	—	0.2	0.3	0.2	0.0	-0.2
GHB						
6th Grade	—	—	—	0.0	0.0	0.0
8th Grade	—	—	—	0.1	0.0	-0.1
10th Grade	—	—	—	0.2	0.2	0.0
12th Grade	—	—	—	0.0	0.0	0.0
Rohypnol						
6th Grade	—	—	—	0.1	0.0	-0.1
8th Grade	—	—	—	0.1	0.0	-0.1
10th Grade	—	—	—	0.1	0.2	+0.1
12th Grade	—	—	—	0.1	0.0	-0.1
Ketamine						
6th Grade	—	—	—	0.1	0.1	0.0
8th Grade	—	—	—	0.1	0.1	0.0
10th Grade	—	—	—	0.2	0.2	0.0
12th Grade	—	—	—	0.1	0.0	-0.1

(Table continued on next page)

TABLE 3 (continued)
Trends in Daily Prevalence of Various Substances
for Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

(Entries are percentages %)

	1996	1998	2000	2002	2003	2002-2003 change
Alcohol ^c						
6th Grade	0.9	0.9	0.7	0.5	0.4	-0.1
8th Grade	3.1	2.8	1.6	1.8	1.5	-0.3
10th Grade	3.8	3.8	2.4	2.5	2.3	-0.2
12th Grade	4.7	3.2	3.5	3.3	2.8	-0.5
Any Tobacco Use						
6th Grade	1.1	0.9	0.4	0.4	0.3	-0.1
8th Grade	6.6	4.9	2.3	1.9	1.6	-0.3
10th Grade	10.8	10.6	6.2	4.6	3.4	-1.2
12th Grade	14.5	14.5	12.1	8.5	7.2	-1.3
Cigarettes						
6th Grade	1.1	0.9	0.4	0.3	0.2	-0.1
8th Grade	6.5	4.8	2.2	1.8	1.5	-0.3
10th Grade	10.6	10.4	6.1	4.5	3.4	-1.1
12th Grade	14.3	14.2	11.8	8.2	6.9	-1.3
Smokeless Tobacco						
6th Grade	0.2	0.1	0.1	0.0	0.1	+0.1
8th Grade	1.1	0.7	0.3	0.2	0.1	-0.1
10th Grade	0.8	0.7	0.3	0.3	0.1	-0.2
12th Grade	1.4	0.5	0.4	0.5	0.4	-0.1

Approximate Weighted Ns for 2003: 6th grade = 16,649; 8th grade = 17,127; 10th grade = 15,921; 12th grade = 12,824.

NOTES: ‘ — ’ indicates data not available. *Daily Prevalence* is defined as use of a substance on 20 or more occasions in the past 30 days.

^a *Any Illicit Drug, Including Inhalants* includes the use of marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^b *Any Illicit Drug, Excluding Inhalants* includes the use of marijuana, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine. Ecstasy was first added to the survey in 1998. GHB, Rohypnol, and ketamine were first added to the survey in 2002.

^c Students were asked if they had tried beer or wine – “more than a few sips,” or hard liquor.

TABLE 4
A Comparison of Nationwide versus Hawaii Substance Usage Rates, by Grade, 2003

(Entries are percentages %)

	Lifetime		30-Day		Daily	
	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003
Any Illicit Drug, Including Inhalants ^a						
6th Grade	—	7.5	—	3.8	—	0.4
8th Grade	30.3	19.2	12.1	10.2	—	1.5
10th Grade	44.9	35.1	20.5	16.6	—	3.3
12th Grade	52.8	46.9	24.6	19.8	—	4.8
Any Illicit Drug, Excluding Inhalants ^b						
6th Grade	—	4.3	—	2.2	—	0.3
8th Grade	22.8	14.3	9.7	8.0	—	1.3
10th Grade	41.4	32.7	19.5	15.9	—	3.3
12th Grade	51.1	46.1	24.1	19.6	—	4.7
Marijuana						
6th Grade	—	1.5	—	1.0	—	0.1
8th Grade	17.5	12.1	7.5	6.6	1.0	1.0
10th Grade	36.4	30.5	17.0	14.8	3.6	3.0
12th Grade	46.1	44.4	21.2	18.4	6.0	4.4
Inhalants						
6th Grade	—	4.2	—	1.9	—	0.1
8th Grade	15.8	9.0	4.1	3.6	—	0.3
10th Grade	12.7	7.9	2.2	2.0	—	0.3
12th Grade	11.2	8.8	1.5	1.3	—	0.1
Cocaine						
6th Grade	—	0.5	—	0.4	—	0.1
8th Grade	3.6	1.2	0.9	0.7	—	0.0
10th Grade	5.1	3.0	1.3	0.9	—	0.2
12th Grade	7.7	4.5	2.1	1.5	—	0.2
Methamphetamine						
6th Grade	—	0.2	—	0.2	—	0.0
8th Grade	3.9	0.9	1.2	0.8	—	0.0
10th Grade	5.2	2.7	1.4	1.2	—	0.2
12th Grade	6.2	4.2	1.7	0.8	—	0.1
Heroin or other Opiates						
6th Grade	—	0.2	—	0.1	—	0.0
8th Grade	1.6	0.7	0.4	0.5	—	0.0
10th Grade	1.5	1.1	0.3	0.6	—	0.2
12th Grade	1.5	1.7	0.4	0.3	—	0.1
Sedatives/Tranquilizers						
6th Grade	—	0.6	—	0.3	—	0.0
8th Grade	4.4	1.2	1.4	0.6	—	0.1
10th Grade	7.8	3.1	2.4	1.0	—	0.3
12th Grade	10.2	5.4	2.8	1.0	—	0.1

(Table continued on next page)

TABLE 4 (continued)
A Comparison of Nationwide versus Hawaii Substance Usage Rates, by Grade, 2003
(Entries are percentages %)

	Lifetime		30-Day		Daily	
	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003
Hallucinogens						
6th Grade	—	0.3	—	0.2	—	0.0
8th Grade	4.0	1.1	1.2	0.7	—	0.1
10th Grade	6.9	3.3	1.5	1.0	—	0.3
12th Grade	10.6	6.5	1.8	1.1	—	0.1
Steroids						
6th Grade	—	1.6	—	0.8	—	0.0
8th Grade	2.5	1.8	0.7	1.0	—	0.1
10th Grade	3.0	2.2	0.8	1.1	—	0.2
12th Grade	3.5	2.4	1.3	0.8	—	0.1
Ecstasy/MDMA						
6th Grade	—	0.2	—	0.2	—	0.0
8th Grade	3.2	1.1	0.7	0.9	—	0.0
10th Grade	5.4	3.5	1.1	1.1	—	0.3
12th Grade	8.3	6.4	1.3	0.8	—	0.0
GHB						
6th Grade	—	0.2	—	0.3	—	0.0
8th Grade	—	0.6	—	0.5	—	0.0
10th Grade	—	1.1	—	0.7	—	0.2
12th Grade	—	1.2	—	0.2	—	0.0
Rohypnol						
6th Grade	—	0.1	—	0.4	—	0.0
8th Grade	1.0	0.5	0.1	0.4	—	0.0
10th Grade	1.0	0.8	0.2	0.5	—	0.2
12th Grade	—	0.8	—	0.3	—	0.0
Ketamine						
6th Grade	—	0.4	—	0.4	—	0.1
8th Grade	—	0.8	—	0.6	—	0.1
10th Grade	—	0.6	—	0.5	—	0.2
12th Grade	—	1.3	—	0.4	—	0.0
Alcohol ^c						
6th Grade	—	13.2	—	3.9	—	0.4
8th Grade	45.6	36.8	19.7	14.6	0.8	1.5
10th Grade	66.0	59.1	35.4	27.0	1.5	2.3
12th Grade	76.6	72.5	47.5	36.3	3.2	2.8
Been Drunk						
6th Grade	—	2.0	—	—	—	—
8th Grade	20.3	13.4	6.7	—	0.2	—
10th Grade	42.4	33.4	18.2	—	0.5	—
12th Grade	58.1	51.6	30.9	—	1.6	—

(Table continued on next page)

TABLE 4 (continued)
A Comparison of Nationwide versus Hawaii Substance Rates, by Grade, 2003

(Entries are percentages %)

	Lifetime		30-Day		Daily	
	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003
Any Tobacco Use						
6th Grade	—	7.2	—	2.9	—	0.3
8th Grade	—	23.1	—	9.0	—	1.6
10th Grade	—	36.7	—	11.6	—	3.4
12th Grade	—	46.1	—	17.0	—	7.2
Cigarettes						
6th Grade	—	6.7	—	2.6	—	0.2
8th Grade	28.4	22.5	10.2	8.5	4.5	1.5
10th Grade	43.0	35.9	16.7	11.3	8.9	3.4
12th Grade	53.7	45.3	24.4	16.3	15.8	6.9
Smokeless Tobacco						
6th Grade	—	0.9	—	0.6	—	0.1
8th Grade	11.3	3.0	4.1	1.4	0.8	0.1
10th Grade	14.6	4.4	5.3	0.9	1.8	0.1
12th Grade	17.0	7.5	6.7	1.6	2.2	0.4

Approximate Weighted Ns for 2003 Hawaii Study: 6th grade=16,649; 8th grade=17,127; 10th grade=15,921; 12th grade=12,824.

NOTES: ‘ — ’ indicates data not available. *Nationwide* indicates 2003 Monitoring the Future Study. *Lifetime* use is defined as use at least once in a student’s lifetime. *30-Day* use is defined as use at least once in the past 30 days. *Daily* use is defined as use on 20 or more occasions in the past 30 days.

^a *Any Illicit Drug, Including Inhalants* includes marijuana, inhalants, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine.

^b *Any Illicit Drug, Excluding Inhalants* includes marijuana, cocaine, methamphetamine, heroin or other opiates, sedatives or tranquilizers, hallucinogens, steroids, ecstasy/MDMA, GHB, Rohypnol, or ketamine.

^c Students were asked if they had tried beer or wine – “more than a few sips,” or hard liquor.

APPENDIX B TREATMENT NEEDS TABLES

Table 5: Hawaii Statewide Treatment Needs Based on the DSM-III-R Criteria for Sixth, Eighth, Tenth, and Twelfth Graders, 2003.

The table first presents alcohol treatment needs for students in grades 6, 8, 10, and 12 by listing the percentages of students who fit either an alcohol dependence (most severe diagnosis and includes both physiological symptoms, such as tolerance and withdrawal, and behavioral symptoms, such as impaired control over the use of a substance) or abuse diagnosis (a residual category for those who don't meet the criteria of dependence but who use substances in dangerous situations or who use substances despite having physical, social, psychological, or occupational problems related to their substance use) according to the DSM-III-R criteria, followed by the percentages of students for each of these categories. Adolescents who meet either a dependence or an abuse diagnosis are considered needing substance abuse treatment. The percentages of students in grades 6, 8, 10, and 12 fitting either a drug dependence or abuse diagnosis, for any illicit drug, are presented next. The percentages of students in grades 6, 8, 10, and 12 fitting drug abuse and dependence diagnoses for each drug classification are also presented. Next a summary of treatment needs is presented, which includes the percentage of students at each grade level who need treatment for alcohol use only, drug use only, both alcohol and drug use, and alcohol and/or drug use (i.e., total treatment needs).

Table 6: Summary of Hawaii Statewide Treatment Needs for Students in Grades 6 Through 12, by County, District, and School Type: Estimated Number and Percentage of Students Needing Treatment for Alcohol and Drug Abuse, 2003.

The table summarizes county, district, and statewide treatment needs estimates for Hawaii students in grades 6 through 12. The column "Any Substance Abuse Treatment Needs" shows that at least 7% of Hawaii students in grades 6 through 12 need treatment for alcohol, drugs, or both alcohol and drugs. Estimates are slightly higher for public school students (7%) than private/charter school students (6%). Not all private and charter schools participated in the study. Thus, any differences between public and private/charter schools may reflect a sampling bias.

TABLE 5
Hawaii Statewide Treatment Needs Based on the DSM-III-R Criteria for
Sixth, Eighth, Tenth, and Twelfth Graders, 2003

STATEWIDE TREATMENT NEEDS	6th Grade	8th Grade	10th Grade	12th Grade
ALCOHOL TREATMENT NEEDS (abuse or dependency)	0.3%	2.3%	7.9%	13.1%
<i>Alcohol Abuse</i>	0.2%	0.5%	1.4%	3.2%
<i>Alcohol Dependency</i>	0.2%	1.8%	6.5%	9.9%
DRUG TREATMENT NEEDS (abuse or dependency of any illicit drug)	0.4%	2.2%	6.9%	10.7%
1. Marijuana Treatment Needs (abuse or dependency)	0.3%	1.9%	6.3%	10.0%
<i>Marijuana Abuse</i>	0.2%	0.5%	1.2%	2.7%
<i>Marijuana Dependency</i>	0.2%	1.4%	5.1%	7.3%
2. Stimulant Treatment Needs (abuse or dependency)	0.1%	0.3%	0.8%	1.3%
<i>Stimulant Abuse</i>	0.1%	0.1%	0.2%	0.3%
<i>Stimulant Dependency</i>	0.0%	0.3%	0.6%	1.0%
3. Depressant Treatment Needs (abuse or dependency)	0.2%	0.4%	0.6%	0.8%
<i>Depressant Abuse</i>	0.1%	0.1%	0.1%	0.2%
<i>Depressant Dependency</i>	0.1%	0.3%	0.5%	0.6%
4. Hallucinogen Treatment Needs (abuse or dependency)	0.1%	0.2%	0.4%	0.9%
<i>Hallucinogen Abuse</i>	0.1%	0.1%	0.2%	0.3%
<i>Hallucinogen Dependency</i>	0.1%	0.2%	0.2%	0.6%
5. Club Drugs Treatment Needs (abuse or dependency)	0.2%	0.5%	0.9%	1.1%
<i>Club Drugs Abuse</i>	0.1%	0.2%	0.4%	0.5%
<i>Club Drugs Dependency</i>	0.1%	0.3%	0.5%	0.6%
SUMMARY OF TREATMENT NEEDS				
Alcohol Treatment Needs <i>Only</i>	0.1%	0.8%	3.4%	5.3%
Drug Treatment Needs <i>Only</i>	0.2%	0.8%	2.6%	3.1%
Both Alcohol and Drug Treatment Needs	0.2%	1.5%	4.5%	7.8%
Total Treatment Needs (Alcohol and/or Drug)	0.5%	3.1%	10.5%	16.3%
Total Student Population	16,649	17,127	15,921	12,824
(a) Estimated # of Students Needing Alcohol Abuse Treatment	55	389	1,255	1,674
(b) Estimated # of Students Needing Drug Abuse Treatment	62	375	1,091	1,373
(c) Estimated # of Students Needing Any Substance Abuse Treatment	85	533	1,667	2,090

NOTE: The sum of the parts may be different than the totals due to rounding. The estimated number of students needing treatment are calculated prior to rounding the percentages needing treatment to one decimal place. Thus, multiplying the percentage needing treatment in a particular grade by the total student population in that grade will, in some circumstances, reflect a slightly different number than that depicted in the table. Some students who abuse alcohol also abuse illicit drugs. Thus, except for the items under Summary of Treatment Needs, the percentages of students who need treatment for various substances cannot be added to get the total percentage needing treatment. For the same reason, (a) estimated # of students needing alcohol abuse treatment and (b) estimated # of students needing drug abuse treatment cannot be added to get (c) estimated # of students needing any substance abuse treatment (i.e., total treatment needs).

TABLE 6
Summary of Hawaii Statewide Treatment Needs for Students in Grades 6 Through 12, by County, District, and School Type: Estimated Number and Percentage of Students Needing Treatment for Alcohol and Drug Abuse, 2003

COUNTY/DISTRICT INFORMATION	Alcohol Abuse Only Treatment Needs		Drug Abuse Only Treatment Needs		Both Alcohol and Drug Abuse Treatment Needs		ANY SUBSTANCE ABUSE TREATMENT NEEDS		Any Alcohol Abuse Treatment Needs		Any Drug Abuse Treatment Needs		
	Total N	%	n	%	n	%	n	%	n	%	n		
City & County of Honolulu	61,096	2.0%	1,203	1.8%	1,073	2.4%	1,493	6.2%	3,759	4.4%	2,670	4.1%	2,486
Honolulu District	16,542	1.7%	289	1.4%	238	2.3%	378	5.5%	902	4.0%	661	3.6%	600
Central District	16,046	1.8%	291	2.0%	324	1.9%	309	5.7%	922	3.7%	595	3.8%	614
Leeward District	19,921	2.0%	399	1.7%	347	2.3%	467	6.1%	1,208	4.3%	858	3.9%	783
Windward District	8,587	2.6%	224	1.9%	164	4.0%	339	8.5%	727	6.5%	556	5.7%	489
Hawaii County/District	12,734	3.5%	450	2.2%	275	4.7%	602	10.4%	1,330	8.2%	1,040	6.6%	846
Kauai County/District	5,632	1.6%	88	1.9%	104	3.5%	199	7.0%	392	5.1%	286	5.2%	294
Maui County/District	10,976	3.0%	326	2.7%	301	3.8%	419	9.5%	1,044	6.8%	746	6.3%	693
All Public Schools	90,438	2.3%	2,067	1.9%	1,753	3.0%	2,713	7.2%	6,525	5.2%	4,742	4.8%	4,319
Private/Charter Schools	22,871	1.9%	433	0.9%	208	2.9%	660	5.7%	1,301	4.8%	1,088	3.7%	845
TOTAL STATEWIDE	113,309	2.2%	2,500	1.7%	1,961	3.0%	3,373	6.9%	7,826	5.1%	5,830	4.6%	5,164

NOTES: A substance abuse/dependency diagnosis is calculated based on the student's response to items that correspond with the DSM-III-R criteria, which assess a variety of negative consequences related to substance use. Students responded to abuse and dependency questions for each of the following substances: alcohol, marijuana, stimulants (cocaine, methamphetamine, speed), depressants or downers (sedatives, heroin), hallucinogens, and club drugs (ecstasy, GHB, Rohypnol, ketamine). *Substance abuse* is indicated by at least one of the following: (1) continued use of the substance despite knowledge of having a persistent or recurrent problem(s) at school, home, work or with friends because of the substance, or (2) substance use in situations in which use is physically hazardous (e.g., drinking or using drugs when involved in activities that could have increased the student's chance of getting hurt). For the student to be classified as abusing a substance, at least one of the two abuse symptoms must have occurred more than once in a single month or several times within the last year. In addition, the student must not meet the criteria for dependency on that substance. *Substance dependency* is the most severe diagnosis. Substance dependency is indicated by the student's response to nine different diagnostic criteria for dependency (e.g., marked tolerance, withdrawal symptoms, use of substances to relieve/avoid withdrawal symptoms, persistent desire or effort to stop use, using more than intended, neglect of activities, great deal of time spent using or obtaining the substance, inability to fulfill roles, drinking or using substances despite having problems). A student is considered dependent on the substance if he/she marked "yes" to at least three DSM-III-R symptoms and if he/she indicated that at least two of the symptoms occurred several times. The abuse estimates above include students who *either* abuse or are dependent on a particular substance. Only public school students are included in the county and district estimates.

APPENDIX C FACTORS RELATED TO SUBSTANCE USE TABLES

Table 7: Age of Onset for Illicit Drug, Alcohol, and Tobacco Use: A Comparison of Responses from Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003.

Students were asked what age, if ever, they first used various substances. Table 7 provides the percentage of students who have used various substances by certain ages.

Table 8: Perceived Harmfulness of Various Substances, as Perceived by Sixth, Eighth, Tenth, and Twelfth Graders, Nationwide versus Hawaii, 2003.

Students were asked to indicate how much they think people risk harming themselves if they engage in various substance use activities. Table 8 lists the percentage of students in Hawaii versus nationwide who associated “a lot of harm/great risk” with various substances.

Table 9: Trends in Friends’ Disapproval of Substance Use, as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003.

Students were asked how their closest friends feel, or would feel, if they participated in various substance use behaviors. Table 9 lists the percentage of students who indicated that their friends would disapprove or strongly disapprove of them using various substances.

Table 10: Trends in Frequent Exposure to People Who Use Alcohol, Tobacco, and Other Drugs, as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003.

Students were asked how frequently they are exposed to tobacco, alcohol, and other drugs by various people in their environment. Table 10 lists the percentage of students who indicated frequent exposure (once a week or more) to people who use various substances.

Table 11: Trends in Perceived Availability of Illicit Drugs, Alcohol, and Cigarettes, as Perceived by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1993-2003.

Students were asked to indicate how difficult it would be for them to get various substances. Table 11 lists the percentage of students who indicated obtaining substances is “fairly easy” or “very easy.”

Table 12: Offers to Use Alcohol, Tobacco, and Other Drugs, and Students’ Ability to Resist Offers, as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003.

Students were asked if they have been offered various substances and whether they have accepted or refused the offers. Table 12 lists the percentage of students who indicated they were offered substances by various people and the percentage of students who indicated they always refused offers.

Table 13: Annual Prevalence of Antisocial Behaviors (ASBs), as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003.

Table 13 lists the percentage of students who reported engaging in specific antisocial behaviors (ASBs) at least once in the past year.

TABLE 7A
Age of Onset for Illicit Drug Use:
A Comparison of Responses From Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003
(Entries are percentages %)

Percent who used by the time they were 9 years old									
Grade level of respondents	Marijuana	Inhalants	Cocaine	Methamphetamine	Heroin or Other Opiates	Sedatives or Tranquilizers	Hallucinogens	Steroids	Ecstasy
6th Grade	0.5	1.9	0.2	0.1	0.1	0.4	0.2	0.6	0.2
8th Grade	1.6	2.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2
10th Grade	1.7	1.5	0.5	0.3	0.3	0.3	0.2	0.3	0.2
12th Grade	1.7	1.6	0.1	0.1	0.1	0.2	0.1	0.2	0.1

Percent who used by the time they were 10 years old									
6th Grade	1.2	3.1	0.4	0.2	0.2	0.5	0.3	1.0	0.2
8th Grade	2.9	3.6	0.5	0.4	0.3	0.5	0.3	0.5	0.3
10th Grade	2.8	2.1	0.6	0.4	0.3	0.4	0.4	0.4	0.3
12th Grade	2.7	2.0	0.2	0.3	0.3	0.3	0.3	0.2	0.1

Percent who used by the time they were 11 years old									
6th Grade	1.4	4.1	0.5	0.2	0.2	0.6	0.3	1.6	0.2
8th Grade	5.4	5.2	0.6	0.5	0.4	0.7	0.5	0.8	0.5
10th Grade	4.5	2.9	0.6	0.5	0.4	0.5	0.5	0.5	0.4
12th Grade	4.2	2.3	0.3	0.4	0.4	0.4	0.4	0.3	0.2

Percent who used by the time they were 12 years old									
6th Grade	1.5	4.2	0.5	0.2	0.2	0.6	0.3	1.6	0.2
8th Grade	9.3	7.6	0.9	0.7	0.5	0.9	0.8	1.3	0.8
10th Grade	8.4	4.1	1.0	0.7	0.4	0.7	1.0	0.6	0.7
12th Grade	8.2	3.6	0.6	0.8	0.7	0.6	0.9	0.3	0.5

(Table continued on next page)

TABLE 7A (continued)
Age of Onset for Illicit Drug Use:
A Comparison of Responses From Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003
(Entries are percentages %)

Percent who used by the time they were 13 years old									
Grade level of respondents	Marijuana	Inhalants	Cocaine	Methamphetamine	Heroin or Other Opiates	Sedatives or Tranquilizers	Hallucinogens	Steroids	Ecstasy
8th Grade	11.8	8.9	1.1	0.8	0.6	1.1	1.0	1.6	1.1
10th Grade	15.2	5.9	1.4	1.2	0.6	1.2	1.7	1.0	1.6
12th Grade	15.2	4.5	1.0	1.2	0.9	1.3	1.4	0.4	1.0

Percent who used by the time they were 14 years old									
8th Grade	12.1	9.0	1.2	0.9	0.7	1.2	1.1	1.8	1.1
10th Grade	25.0	7.2	2.2	2.1	0.8	2.3	2.6	1.4	2.5
12th Grade	23.5	5.6	1.5	1.8	1.0	1.9	2.3	0.4	2.5

Percent who used by the time they were 15 years old									
10th Grade	29.8	7.9	2.9	2.6	1.0	3.1	3.2	2.0	3.3
12th Grade	33.7	6.9	2.2	2.6	1.3	2.9	3.6	0.8	4.3

Percent who used by the time they were 16 years old									
10th Grade	30.5	7.9	3.0	2.7	1.1	3.1	3.3	2.2	3.5
12th Grade	40.9	8.5	3.4	3.8	1.6	4.7	5.8	1.9	6.1

Percent who used by the time they were 17 or 18 years old									
12th Grade	44.4	8.8	4.5	4.2	1.7	5.4	6.5	2.4	6.4

TABLE 7B
Age of Onset for Alcohol and Tobacco Use:
A Comparison of Responses From Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003

(Entries are percentages %)

Percent who used by the time they were 9 years old					
Grade level of respondents	Alcohol	Been Drunk	Regularly Drank Alcohol	Smoked First Cigarette	Smokeless Tobacco
6th Grade	7.3	0.7	0.5	4.2	0.5
8th Grade	12.5	2.2	1.5	8.1	0.8
10th Grade	12.1	1.6	1.1	8.9	0.8
12th Grade	9.1	1.4	0.6	8.6	1.3

Percent who used by the time they were 10 years old					
6th Grade	11.3	1.6	1.1	5.8	0.7
8th Grade	17.4	3.6	2.2	11.6	1.3
10th Grade	15.2	2.5	1.4	12.6	1.2
12th Grade	12.1	2.1	0.9	12.1	1.7

Percent who used by the time they were 11 years old					
6th Grade	13.1	2.0	1.5	6.7	0.9
8th Grade	22.4	5.5	3.6	15.4	1.9
10th Grade	19.0	3.9	2.2	15.2	1.5
12th Grade	14.7	3.3	1.3	15.0	2.1

Percent who used by the time they were 12 years old					
6th Grade	13.2	2.0	1.6	6.7	0.9
8th Grade	31.1	9.6	6.6	19.8	2.6
10th Grade	26.0	7.1	4.0	20.8	1.9
12th Grade	21.2	6.5	2.4	20.9	2.8

(Table continued on next page)

TABLE 7B (continued)
Age of Onset for Alcohol and Tobacco Use:
A Comparison of Responses From Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003
(Entries are percentages %)

Percent who used by the time they were 13 years old					
Grade level of respondents	Alcohol	Been Drunk	Regularly Drank Alcohol	Smoked First Cigarette	Smokeless Tobacco
8th Grade	36.4	12.9	9.7	22.3	2.9
10th Grade	37.4	14.5	7.8	28.5	2.3
12th Grade	30.6	11.8	4.2	27.2	3.6

Percent who used by the time they were 14 years old					
8th Grade	36.8	13.4	10.3	22.5	3.0
10th Grade	51.5	24.8	15.8	33.2	3.5
12th Grade	41.1	19.9	9.0	32.7	4.7

Percent who used by the time they were 15 years old					
10th Grade	58.4	32.7	23.5	35.6	4.3
12th Grade	55.5	31.5	18.0	38.2	5.9

Percent who used by the time they were 16 years old					
10th Grade	59.1	33.4	24.7	35.9	4.4
12th Grade	67.5	45.9	31.0	43.0	7.0

Percent who used by the time they were 17 or 18 years old					
12th Grade	72.5	51.6	40.6	45.3	7.5

TABLE 8
Perceived Harmfulness of Various Substances, as Perceived by
Sixth, Eighth, Tenth, and Twelfth Graders, Nationwide versus Hawaii, 2003

% saying “A lot of harm/Great risk”^a

	6th Grade ^b	8th Grade		10th Grade		12th Grade	
	Hawaii 2003	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003	Nationwide 2003	Hawaii 2003
<i>Q: How much do you think people harm or hurt themselves (physically or in other ways) if they:</i>							
Use marijuana (hash, pakalolo, pot, weed) occasionally?	70.1	48.6	67.9	34.9	56.5	26.6	52.3
Use inhalants (glue, paint, sprays) occasionally?	61.6	40.3	65.8	47.7	71.3	—	75.8
Use cocaine (crack, coke, blow, freebase) occasionally?	71.8	70.3	76.5	76.4	78.9	69.1	81.8
Use methamphetamine (crystal meth, speed, ice, batu, crank) occasionally? ^c	72.3	—	76.1	—	80.0	51.2	82.5
Use hallucinogens (LSD/PCP, shrooms, acid) occasionally? ^d	64.5	27.9	71.6	40.8	75.1	36.2	77.8
Use ecstasy or other “ club drugs ” (E, XTC, GHB, liquid ecstasy, liquid X, Rohypnol, roofies, ketamine, special K) occasionally? ^e	64.0	65.8	71.6	71.7	76.1	56.3	78.5
Have five or more drinks of alcohol once or twice each weekend?	60.4	56.5	56.4	51.6	51.5	43.5	51.6
Smoke one or more packs of cigarettes a day?	65.0	57.7	69.2	65.7	71.9	72.1	76.7

NOTES: ‘—’ indicates data not available. *Nationwide* refers to results from the 2003 *Monitoring the Future Study (MTF)*.

^a Answer alternatives for the *Hawaii Student Alcohol and Drug Use Survey* were (1) No harm, (2) Some harm, (3) A lot of harm, and (4) I don’t know. Answer alternatives for the MTF study were (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can’t say, drug unfamiliar. The percentage saying “A lot of harm” on the Hawaii survey and “Great risk” on the MTF survey are reported in the table.

^b Sixth graders are not surveyed in the *Monitoring the Future Study*.

^c MTF asks about using methamphetamine once or twice, rather than using methamphetamine occasionally. Thus, the nationwide data may not be comparable to the Hawaii data.

^d MTF asks about using LSD once or twice, rather than using hallucinogens occasionally. Thus, the nationwide data may not be comparable to the Hawaii data.

^e MTF asks only about using ecstasy occasionally, rather than about using any club drugs occasionally.

TABLE 9
Trends in Friends' Disapproval of Substance Use, as Reported by
Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

(Entries are percentages %)

<i>Q: How do you think your close friends feel (or would feel) about you:</i>	1996	1998	2000	2002	2003	'02-'03 change
Having five or more alcoholic drinks once or twice every weekend?						
<i>6th Grade</i>	81.8	82.4	86.2	87.6	88.9	+1.3
<i>8th Grade</i>	70.2	70.9	75.3	77.5	80.9	+3.4
<i>10th Grade</i>	60.4	59.4	65.9	62.6	67.8	+5.2
<i>12th Grade</i>	56.2	51.5	56.6	55.2	57.3	+2.1
Smoking one or more packs of cigarettes a day?						
<i>6th Grade</i>	80.2	80.6	85.4	86.9	88.4	+1.5
<i>8th Grade</i>	71.2	71.9	75.6	80.1	83.4	+3.3
<i>10th Grade</i>	70.9	69.9	76.6	77.4	80.9	+3.5
<i>12th Grade</i>	69.6	67.1	74.9	75.7	79.8	+4.1
Using marijuana (hash, pakalolo, pot, weed) occasionally?						
<i>6th Grade</i>	85.5	85.5	86.9	88.7	89.7	+1.0
<i>8th Grade</i>	73.3	74.9	75.7	77.8	82.0	+4.2
<i>10th Grade</i>	67.2	63.0	66.6	64.3	69.7	+5.4
<i>12th Grade</i>	62.0	58.8	59.0	59.3	63.2	+3.9
Trying inhalants (glue, paint, sprays) to get high?						
<i>6th Grade</i>	82.2	82.2	86.2	88.3	89.5	+1.2
<i>8th Grade</i>	78.6	78.9	80.2	84.5	87.8	+3.3
<i>10th Grade</i>	85.4	84.1	86.2	87.2	88.7	+1.5
<i>12th Grade</i>	87.3	87.3	89.7	90.3	91.2	+0.9
Using cocaine (crack, coke, blow, freebase) once or twice?						
<i>6th Grade</i>	86.1	86.2	87.5	89.8	90.3	+0.5
<i>8th Grade</i>	82.5	82.4	82.2	86.5	89.8	+3.4
<i>10th Grade</i>	87.0	86.8	87.3	88.3	90.1	+1.8
<i>12th Grade</i>	86.5	88.7	89.8	90.8	90.6	-0.2
Using methamphetamine (crystal meth., speed, ice, batu) once or twice?						
<i>6th Grade</i>	87.9	87.1	87.3	90.2	90.7	+0.5
<i>8th Grade</i>	85.1	83.8	82.5	87.1	90.5	+3.4
<i>10th Grade</i>	89.4	88.0	87.6	88.6	90.5	+2.0
<i>12th Grade</i>	90.3	90.4	90.3	91.0	92.1	+1.1
Using ecstasy occasionally?						
<i>6th Grade</i>	—	—	—	90.1	90.4	+0.3
<i>8th Grade</i>	—	—	—	85.4	89.8	+4.4
<i>10th Grade</i>	—	—	—	83.3	89.4	+6.1
<i>12th Grade</i>	—	—	—	84.4	88.7	+4.3

NOTES: ' — ' indicates data not available. Answer alternatives were (1) Would think it was cool, (2) Wouldn't care, (3) Would disapprove, and (4) Would strongly disapprove. The percentages above represent students who responded that their friends would disapprove or would strongly disapprove of them using various substances.

TABLE 10
Trends in Frequent Exposure to People Who Use Alcohol, Tobacco, and Other Drugs,
as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

% saying “once a week” or “every day”^a

<i>Q: During the last 12 months, how often have you been around the following people when they were using:</i>	6th Grade						8th Grade					
	1996	1998	2000	2002	2003	'02-'03 change	1996	1998	2000	2002	2003	'02-'03 change
Alcohol:												
Parents ^b	—	17.5	13.0	16.1	15.8	-0.3	—	24.4	19.7	22.9	23.2	+0.3
Brothers or Sisters ^b	—	2.1	1.4	1.9	1.5	-0.4	—	4.1	4.1	4.2	4.2	0.0
Other Relatives	14.0	12.3	7.5	11.0	10.6	-0.4	15.3	15.1	12.1	14.8	15.3	+0.5
Your Closest Friends	4.5	1.6	0.9	1.4	1.2	-0.2	10.8	7.3	5.5	5.8	5.1	-0.7
Other People	13.2	12.9	4.7	8.4	7.9	-0.5	16.3	16.5	8.3	11.9	12.3	+0.4
Tobacco:												
Parents	—	15.0	16.1	20.6	17.9	-2.7	—	22.5	21.4	24.8	23.6	-1.2
Brothers or Sisters	—	3.2	2.7	3.5	3.1	-0.4	—	6.9	6.7	7.1	6.3	-0.8
Other Relatives	11.9	11.2	10.4	15.8	15.5	-0.3	15.2	15.7	16.5	19.2	20.1	+1.0
Your 10 Closest Friends	6.2	2.4	1.5	2.4	1.7	-0.7	19.7	13.3	8.6	10.0	7.9	-2.1
Other People	14.4	15.9	7.3	13.0	12.6	-0.4	22.1	28.6	14.3	20.5	19.5	-1.0
Illicit Drugs:												
Parents	—	1.4	3.8	3.8	3.4	-0.4	—	2.4	3.3	3.6	2.9	-0.7
Brothers or Sisters	—	1.0	1.0	0.9	0.7	-0.2	—	2.7	2.3	2.2	1.7	-0.5
Other Relatives	2.5	1.8	2.6	3.6	3.3	-0.3	5.1	3.3	3.5	3.8	3.2	-0.6
Your Closest Friends	2.5	1.1	0.9	1.0	0.7	-0.3	3.7	6.7	4.7	5.2	3.7	-1.5
Other People	4.3	3.3	2.4	3.6	3.4	-0.2	2.5	6.1	4.9	6.2	5.5	-0.7
Frequent exposure to at least one person who uses alcohol	37.1	29.7	18.3	24.8	24.1	-0.7	43.2	37.9	27.7	33.9	34.1	+0.2
Frequent exposure to at least one person who uses tobacco	31.8	30.6	25.4	35.3	33.0	-2.3	42.7	45.3	37.3	43.4	42.6	-0.8
Frequent exposure to at least one person who uses illicit drugs	7.8	5.5	7.0	8.2	8.2	0.0	15.1	12.0	9.9	11.4	10.3	-1.1

(Table continued on next page)

TABLE 10 (continued)
Trends in Frequent Exposure to People Who Use Alcohol, Tobacco, and Other Drugs,
as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1996-2003

% saying “once a week” or “every day”^a

<i>Q: During the last 12 months, how often have you been around the following people when they were using:</i>	10th Grade						12th Grade					
	1996	1998	2000	2002	2003	'02-'03 change	1996	1998	2000	2002	2003	'02-'03 change
Alcohol:												
Parents ^b	—	25.6	23.7	26.0	25.9	-0.1	—	25.8	24.5	24.5	26.1	+1.6
Brothers or Sisters ^b	—	6.5	4.9	6.8	6.6	-0.2	—	6.8	7.3	7.3	8.5	+1.2
Other Relatives	16.3	14.8	14.1	17.4	18.4	+1.0	14.9	12.8	13.2	14.3	15.4	+1.1
Your Closest Friends	18.9	15.0	12.4	13.8	12.8	-1.0	27.1	24.2	23.4	21.5	21.9	+0.4
Other People	16.3	19.4	12.2	15.8	16.8	+1.0	18.7	21.9	16.4	17.1	19.6	+2.5
Tobacco:												
Parents	—	25.4	24.9	26.4	24.2	-2.2	—	26.4	25.7	25.8	25.1	-0.7
Brothers or Sisters	—	10.4	8.7	9.2	8.7	-0.5	—	11.8	11.0	10.1	10.0	-0.1
Other Relatives	19.8	17.9	18.3	22.2	20.9	-1.3	18.4	16.8	18.8	19.5	20.9	+1.4
Your Closest Friends	35.0	27.2	20.3	21.2	17.0	-4.2	43.1	37.6	34.1	30.7	27.5	-3.2
Other People	35.6	43.5	28.0	34.5	31.6	-2.9	37.5	47.4	34.9	36.8	35.7	-1.1
Illicit Drugs:												
Parents	—	3.1	3.5	3.5	3.3	-0.2	—	2.2	3.3	2.9	3.3	+0.4
Brothers or Sisters	—	3.5	3.1	3.7	2.9	-0.8	—	2.7	3.6	2.9	4.1	+1.2
Other Relatives	3.4	3.7	4.6	4.2	4.1	-0.1	3.4	2.8	3.6	3.7	3.7	0.0
Your Closest Friends	16.2	14.9	11.5	12.8	9.7	-3.1	21.5	16.4	16.9	15.7	13.7	-2.0
Other People	12.0	12.1	9.4	12.5	9.8	-2.7	13.6	11.3	11.7	12.1	12.0	-0.1
Frequent exposure to at least one person who uses alcohol	50.9	43.8	38.4	41.3	40.5	-0.8	53.0	48.2	45.0	43.9	45.5	+1.6
Frequent exposure to at least one person who uses tobacco	58.5	60.6	50.5	56.0	51.2	-4.8	60.8	66.7	59.4	58.7	56.4	-2.3
Frequent exposure to at least one person who uses illicit drugs	20.6	20.7	17.0	19.7	15.7	-4.0	25.1	21.7	22.0	20.6	19.3	-1.3

NOTE: ‘—’ indicates data not available.

^a Answer alternatives were (1) Not at all, (2) A few times a year, (3) Once or twice a month, (4) At least once a week, and (5) Almost every day.

^b In 1996, students reported on exposure to family members. From 1998 through 2003, students reported on exposure to parents and to brothers or sisters. Thus, the 1996 data regarding family members is not comparable to the 1998-2003 data regarding parents and brothers or sisters.

TABLE 11
Trends in Perceived Availability of Illicit Drugs, Alcohol, and Cigarettes,
as Perceived by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 1993-2003

% saying “very easy” or “fairly easy” to get^a

<i>Q: If you wanted some, how easy would it be for you to get:</i>	1993	1996	1998	2000	2002	2003	'02-'03 change
Marijuana (hash, pakalolo, pot, weed)?							
6th Grade	11.0	10.7	6.5	6.0	9.5	7.8	-1.7
8th Grade	39.0	39.1	26.5	26.8	34.5	25.5	-9.0
10th Grade	63.0	64.1	57.2	57.3	62.7	55.6	-7.1
12th Grade	71.0	71.8	66.6	71.0	71.8	69.8	-2.0
Cocaine (crack, coke, blow, freebase)?							
6th Grade	—	7.1	4.4	4.2	5.9	6.0	+0.1
8th Grade	14.0	14.6	8.4	11.5	13.3	9.7	-3.6
10th Grade	27.0	23.6	15.0	21.7	22.3	19.5	-2.8
12th Grade	32.0	30.1	18.5	28.8	27.4	27.7	+0.3
Methamphetamine (crystal meth., ice, speed, batu, crank)?							
6th Grade	—	5.4	4.0	3.8	5.1	5.6	+0.5
8th Grade	15.0	11.3	8.2	10.6	11.2	9.0	-2.2
10th Grade	28.0	21.5	17.4	20.5	21.3	19.2	-2.1
12th Grade	35.0	29.4	22.2	28.8	26.3	27.0	+0.7
Hallucinogens (LSD/PCP, shrooms, acid)?							
6th Grade	—	8.8	5.8	4.3	5.0	4.9	-0.1
8th Grade	—	18.4	10.9	11.6	11.5	8.0	-3.5
10th Grade	—	33.3	25.2	24.0	23.8	17.4	-6.4
12th Grade	—	39.9	30.1	32.5	30.1	25.0	-5.1
Ecstasy or other “club drugs” (E, XTC, G, GHB, liquid ecstasy, Rohypnol, roofies, ketamine, special K)?							
6th Grade	—	—	3.4	3.6	5.2	5.1	-0.1
8th Grade	—	—	6.2	10.4	14.8	8.5	-6.3
10th Grade	—	—	14.9	25.9	33.7	19.7	-14.0
12th Grade	—	—	22.4	39.0	44.2	32.1	-12.1
Alcohol (beer, wine, or hard liquor)?							
6th Grade	—	40.9	23.0	17.4	22.5	19.5	-3.0
8th Grade	—	74.4	51.3	47.6	53.4	47.4	-6.0
10th Grade	—	87.4	72.1	73.8	76.0	72.3	-3.7
12th Grade	—	92.2	77.4	83.7	83.3	81.7	-1.6
Cigarettes?							
6th Grade	—	32.3	19.7	14.3	22.3	18.0	-4.3
8th Grade	—	66.7	48.3	42.6	51.8	43.0	-8.8
10th Grade	—	83.1	72.6	69.8	73.4	67.8	-5.6
12th Grade	—	89.8	86.1	86.0	86.5	80.4	-6.1

NOTE: ‘ — ’ indicates data not available.

^a Answer alternatives were (1) Very easy, (2) Fairly easy, (3) Fairly difficult, and (4) Very difficult. The percentages in the table include those students saying either “very easy” or “fairly easy” to get.

TABLE 12
Offers to Use Alcohol, Tobacco, and Other Drugs, and Students' Ability to Resist Offers,
as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003

Have you ever been offered:	OFFERED % Saying They Received Offers ^a				RESISTED % Able to Resist Offers ^b			
	6th	8th	10th	12th	6th	8th	10th	12th
Alcohol:								
by your parents?	4.5	13.6	22.4	26.9	25.2	17.6	12.4	12.4
by a brother or sister?	1.9	9.0	17.0	25.2	37.5	16.8	15.4	12.9
by other relatives?	5.4	17.7	32.1	41.8	45.2	31.0	21.9	20.7
by friends?	3.9	23.6	53.6	72.8	56.5	33.9	25.6	20.7
by strangers?	4.7	8.7	15.9	24.9	89.1	82.0	64.8	50.8
Tobacco:								
by your parents?	1.0	2.5	2.7	4.6	49.5	47.7	43.2	30.3
by a brother or sister?	2.1	5.4	8.1	11.5	46.5	31.3	35.9	25.9
by other relatives?	3.2	9.0	13.5	17.6	57.7	41.6	42.5	38.0
by friends?	7.1	27.7	47.9	57.8	65.8	55.3	56.0	49.7
by strangers?	8.6	15.0	21.9	22.1	93.5	87.9	82.3	73.8
Drugs:								
by your parents?	0.5	1.0	1.9	3.1	30.4	35.3	28.2	27.0
by a brother or sister?	0.8	2.9	6.0	10.0	43.0	20.5	19.9	17.5
by other relatives?	1.1	4.5	8.2	11.1	50.1	34.9	29.3	25.2
by friends?	2.1	13.1	33.2	44.9	61.9	51.0	43.7	37.9
by strangers?	3.8	6.8	12.9	20.0	92.3	85.5	71.0	65.6

^a Answer alternatives were (1) No, (2) Yes, and I've accepted, and (3) Yes, and I've always refused. The percentages in the columns under "Offered" include those students who either said "Yes, and I've accepted," or "Yes, and I've always refused."

^b The percentages under the column "Resisted" represent those students who were offered various substances (answered "yes, and I've accepted" or "yes, and I've always refused.") who indicated that they have always refused the offer (answered "yes, and I've always refused").

TABLE 13
Annual Prevalence of Antisocial Behaviors (ASBs),
as Reported by Hawaii Sixth, Eighth, Tenth, and Twelfth Graders, 2003

(Entries are percentages %)

<i>Number of Times ASB Occurred in Past Year or 12 Months:</i>	% Saying Specific Number of Times			
	1 or 2 Times	3 to 5 Times	6 + Times	<u>At Least Once</u>
Been Suspended From School				
6th Grade	4.5	0.7	0.6	5.8
8th Grade	10.9	1.8	1.9	14.6
10th Grade	8.0	1.1	0.8	9.9
12th Grade	7.4	1.0	0.3	8.7
Been Drunk or High at School				
6th Grade	0.9	0.1	0.3	1.3
8th Grade	4.6	1.5	2.0	8.1
10th Grade	7.5	2.7	6.5	16.7
12th Grade	8.2	3.1	7.9	19.2
Taken a Handgun to School				
6th Grade	0.3	0.1	0.1	0.5
8th Grade	0.5	0.1	0.2	0.8
10th Grade	0.6	0.2	0.5	1.3
12th Grade	0.4	0.2	1.0	1.6
Sold Illegal Drugs				
6th Grade	0.2	0.1	0.2	0.5
8th Grade	1.5	0.6	0.5	2.6
10th Grade	3.3	1.3	1.9	6.5
12th Grade	3.7	1.5	3.6	8.8
Stolen or Tried to Steal a Vehicle				
6th Grade	0.6	0.1	0.3	1.0
8th Grade	3.4	0.3	0.4	4.1
10th Grade	2.4	0.6	0.6	3.6
12th Grade	1.8	0.7	1.3	3.8
Attacked Someone With Intent of Harm				
6th Grade	6.0	1.0	1.1	8.1
8th Grade	10.7	2.5	1.8	15.0
10th Grade	8.1	2.0	2.2	12.3
12th Grade	7.0	1.8	2.8	11.6
Carried a Handgun				
6th Grade	1.5	0.3	0.4	2.2
8th Grade	2.3	0.5	0.8	3.6
10th Grade	1.4	0.8	0.9	3.1
12th Grade	2.0	0.7	1.6	4.3
Been Arrested				
6th Grade	1.1	0.1	0.3	1.5
8th Grade	5.0	0.9	0.6	6.5
10th Grade	5.7	1.2	0.8	7.7
12th Grade	6.1	0.9	0.7	7.7

NOTES: *Annual Prevalence* refers to occurrence in the past 12 months. Students were asked how many times they have engaged in each antisocial behavior, listed in the table, during the past year or 12 months. Answer alternatives were (1) never, (2) 1 or 2 times, (3) 3 to 5 times, (4) 6 to 9 times, (5) 10 to 19 times, (6) 20 to 29 times, and (7) 30+ times.

APPENDIX D RISK AND PROTECTIVE FACTORS TABLES

Table 14: Risk and Protective Factor Definitions.

Table 14 lists and defines the 24 risk factors and the 10 protective factors that were used in the study to create community prevention profiles. Risk factors are characteristics of school, community, and family environments, as well as characteristics of students and their peer groups, that are known to predict increased likelihood of drug use, delinquency, and violent behaviors among youths (Arthur, Glaser, & Hawkins, 2003; Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002; Hawkins, Catalano, & Miller, 1992). Protective factors exert a positive influence or buffer against the negative influence of risk, thus reducing the likelihood that adolescents will engage in problem behaviors. Protective factors include social bonding to family, school, community, and peers; healthy beliefs and clear standards for behavior; and individual characteristics. For bonding to serve as a protective influence, it must occur through involvement with peers and adults who communicate healthy values and set clear standards for behavior. Research on risk and protective factors has important implications for prevention efforts. The premise of this approach is that, in order to promote positive youth development and prevent problem behaviors, it is necessary to address those factors that predict the problem behaviors. By measuring risk and protective factors in a population, prevention programs can be implemented that will reduce elevated risk factors and increase protective factors.

Table 15: Correlations Between Risk/Protective Factors, Substance Use, and Antisocial Behaviors (ASBs) Prevalence, 2003.

The predictive utility of risk and protective factor indexes and individual risk and protective factors were examined by correlating each index and factor with the occurrence of substance use and antisocial behaviors (ASBs). One important caveat should be made regarding the utility of statistical correlations based on variables that are measured at the same point in time. Some risk and protective factors may influence substance use and ASBs years down the line. Thus, the relationships between the risk or protective factors and current substance use and ASBs might be, in some instances, quite small. All of the risk and protective factors included in this study have been shown by other researchers to predict future substance use and adolescent delinquency. That is, all of the factors were previously tested over time, and each were determined to significantly predict future substance use. Correlations presented in Table 15 provide further proof that each factor is statistically related to substance use.

Table 16: Trends in Problematic Risk and Protective Factors in Hawaii, by County (Place of Residence) and Public School District: Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003.

Table 17: Trends in Problematic Risk and Protective Factors in Hawaii, by Sex and Ethnicity: Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003.

Tables 16 and 17 highlight specific risk and protective factors that should be the focus of prevention efforts in various communities and among different subgroups. County-level data includes public, private, and charter school students. District-level data includes only public school students. The tables illustrate factors that were problematic in 2000, 2002, 2003, or all three survey years.

TABLE 14
Risk and Protective Factor Definitions

Community Domain	Risk Factors	
	Community Disorganization	Defined as the prevalence of crime, violence, and delinquency in the neighborhood. Research has shown that neighborhoods with high population density, lack of public surveillance, physical deterioration, and high rates of adult crime also have higher rates of juvenile crime and drug selling.
	Transition & Mobility	Defined as amount of movement from one community or school to another. Neighborhoods with high rates of residential mobility have been shown to have higher rates of juvenile crime and drug selling, while children who experience frequent residential moves and stressful life transitions have been shown to have higher risk for school failure, delinquency, and drug use.
	Exposure to Community Alcohol, Tobacco, and Other Drug (ATOD) Use	Defined as frequent exposure to alcohol, tobacco, and other drug (ATOD) use by people in one's neighborhood or school. Frequent exposure to ATOD use influences normative beliefs and understanding of how to engage in the behavior and, thus, increases likelihood of ATOD use.
	Laws & Norms Favorable to Drug Use	Defined as the attitudes and policies a community holds about drug use and crime. Research has shown that legal restrictions on alcohol and tobacco use, such as raising the legal drinking age, restricting smoking in public places, and increasing taxation, have been followed by decreases in consumption. Moreover, national surveys of high school seniors have shown that shifts in normative attitudes toward drug use have preceded changes in prevalence of use.
	Perceived Availability of Drugs & Handguns	Defined as the perceived ease in obtaining drugs and firearms for adolescents. The availability of cigarettes, alcohol, marijuana, and other illegal drugs has been related to the use of these substances by adolescents. Availability of handguns is also related to a higher risk of crime by adolescents.
	Ability to Purchase Alcohol or Tobacco	Defined as whether or not a student has been able to purchase alcohol and/or tobacco from a store employee, a bar, or a restaurant. Corresponding with perceived availability, opportunities to purchase alcohol and tobacco have been related to use of these substances by adolescents.
	Protective Factors	
	Community Opportunities for Positive Involvement	Defined as opportunities to engage in prosocial activities in the community, such as sports or adult-supervised clubs. When opportunities are available in a community for positive participation, children are less likely to engage in substance use and other problem behaviors.
Community Rewards for Positive Involvement	Defined as community encouragement for adolescents engaging in positive activities. Rewards for positive participation in activities help children bond to the community, thus lowering their risk for substance use.	
Family Domain	Risk Factors	
	Poor Family Supervision	Defined as a lack of clear expectations for behavior and a failure of parents to monitor their children. Parents' failure to provide clear expectations and to monitor their children's behavior makes it more likely that their children will engage in drug use, whether or not there are family drug problems.
	Lack of Parental Sanctions for Antisocial Behaviors (ASBs)	Defined as a low probability that parents will sanction their children for substance use, skipping school, and handgun use. Parents' failure to clearly communicate to their children that their children would be in trouble if caught using substances or engaging in antisocial behaviors places children at higher risk for substance use.
	Parental Attitudes Favorable Toward ATOD Use	Defined as parental attitudes approving of young people's ATOD use. In families where parents are tolerant of children's use, children are more likely to become drug abusers during adolescence.
	Exposure to Family ATOD Use	Defined as a high degree of exposure to parents' ATOD use. In families where parents use illegal drugs or are heavy users of alcohol, children are more likely to become drug abusers during adolescence. The risk is further increased if parents involve children in their own substance-using behavior – for example, asking the child to light the parent's cigarette or to get the parent a beer from the refrigerator.
	Parental Attitudes Favorable Toward ASB	Defined as parental attitudes excusing children for breaking laws. In families where parents are tolerant of antisocial behavior, children are more likely to engage in antisocial behavior.
	Family (Sibling) History of ASB	Defined as high ASB prevalence among brothers and sisters. When children are raised in a family with a history of problem behaviors, the children are more likely to engage in these behaviors.
	Protective Factors	
	Family Attachment	Defined as feeling connected to and loved by one's family. Young people who feel that they are a valued part of their family are less likely to engage in substance use and other problem behaviors.
Family Opportunities for Positive Involvement	Defined as opportunities for positive social interaction with parents. Young people who are exposed to more opportunities to participate meaningfully in the responsibilities and activities of the family are less likely to engage in drug use and other problem behaviors.	
Family Rewards for Positive Involvement	Defined as positive experiences with parental figures. When family members praise, encourage, and attend to their children's accomplishments, children are less likely to engage in substance use and ASB.	

(Table continued on next page)

TABLE 14 (continued)
Risk and Protective Factor Definitions

School Domain	Risk Factors	
	Low School Commitment	Defined as the student's inability to see the role of a student as a viable one. Factors such as disliking school and perceiving the course work as irrelevant are positively related to drug use.
	Poor Academic Performance	Defined as poor performance in school. Beginning in the late elementary grades (grades 4-6), academic failure increases the risk of drug abuse and delinquency.
	Protective Factors	
	School Opportunities for Positive Involvement	Defined as opportunities to become involved in school activities. When young people are given more opportunities to participate meaningfully in important activities at school, they are less likely to engage in drug use or problem behaviors.
School Rewards for Positive Involvement	Defined as positive feedback by school personnel for student achievement. When young people are recognized and rewarded for their contributions at school, they are less likely to be involved in substance use and other problem behaviors.	
Peer-Individual Domain	Risk Factors	
	Early Initiation of Problem Behaviors	Defined as early substance use and early onset of problem behaviors. The earlier the onset of any drug use, the greater the involvement in other drug use. Onset of drug use prior to the age of 15 is a consistent predictor of drug abuse; later age of onset of drug use has been shown to predict lower drug involvement and a greater probability of discontinuation of use.
	Favorable Attitudes Toward ATOD Use	Defined as perceptions that it is not wrong for young people to engage in ATOD use. Initiation of use of any substance is preceded by values favorable to its use. During the elementary school years, most children express anti-drug, anti-crime, and prosocial attitudes and have difficulty imagining why people use drugs. However, in middle school, as more youths are exposed to others who use drugs, their attitudes often shift toward greater acceptance of these behaviors. Youths who express positive attitudes toward drug use are at higher risk for subsequent drug use.
	Low Perceived ATOD Use Risk	Defined as perceived harmfulness associated with ATOD use. Young people who do not perceive drug use to be risky are far more likely to engage in drug use.
	Antisocial Behaviors (ASBs)	Defined as engaging in problem behaviors such as violence and delinquency.
	Favorable Attitudes Toward ASB	Defined as a student's acceptance of drug use, criminal activity, violent behavior, or ignorance of rules. Young people who accept or condone antisocial behavior are more likely to engage in a variety of problem behaviors, including drug use.
	Friends' ATOD Use	Defined as having several close friends who engage in ATOD use. Peer drug use has consistently been found to be among the strongest predictors of substance use among youths – even when young people come from well-managed families and do not experience other risk factors.
	Interaction with Antisocial Peers	Defined as having several close friends who engage in problem behaviors. Young people who associate with peers who engage in problem behaviors are at higher risk for engaging in antisocial behavior themselves.
	Rewards for Antisocial Involvement	Defined as having friends who approve of ATOD use and who are ignorant of laws and rules. Young people who receive rewards for their ASB are at higher risk for engaging further in ASB and ATOD use.
	Rebelliousness	Defined as not being bound by rules and taking an active rebellious stance toward society. Young people who do not feel like part of society, are not bound by rules, do not believe in trying to be successful or responsible, or who take an active rebellious stance toward society, are at higher risk of abusing drugs.
	Sensation Seeking	Defined as having a high need for sensation or arousal experiences. Young people with a high need for arousal have increased risk for participating in ATOD use and other problem behaviors.
	Protective Factors	
	Peer Disapproval of ATOD Use	Defined as student perceptions that his or her close friends would disapprove of him or her using substances. Peer pressure is a strong factor influencing adolescent behavior, and peer pressure not to use alcohol, tobacco, and other drugs is a very powerful deterrent.
	Belief in the Moral Order	Defined as beliefs that one is bound by societal rules. Young people who have a belief in what is "right" and "wrong" are less likely to use drugs.
	Educational Aspirations	Defined as aspirations for continuing on to and graduating from college. National surveys of high school seniors have shown that ATOD use is significantly lower among students who expect to attend and graduate from college than among those who do not.

TABLE 15
Correlations Between Risk/Protective Factors, Substance Use, and Antisocial Behaviors (ASBs) Prevalence, 2003

(Entries are correlations)

Risk/Protective Factors	Alcohol, Tobacco, and Other Drug (ATOD) Use						Frequency of ASB Occurrence				
	Number of Drugs Used in Lifetime	Number of Drugs Used Past 30 Days	Monthly Cigarette Use	Monthly Alcohol Use	Monthly Marijuana Use	Substance Abuse	Drunk at School	Suspended from School	Attacked Someone	Sold Illegal Drugs	Arrested
Community Domain: Risk Factors											
Community Disorganization	.17	.13	.11	.16	.13	.13	.14	.10	.17	.11	.10
Transition & Mobility	.13	.07	.09	.10	.08	.09	.10	.09	.10	.07	.09
Exposure to Community ATOD Use	.37	.27	.30	.37	.34	.34	.32	.13	.21	.24	.16
Laws and Norms Favorable to ATOD Use	.37	.25	.25	.33	.29	.31	.31	.16	.19	.23	.17
Perceived Availability of Drugs and Handguns	.40	.26	.23	.34	.29	.30	.31	.14	.21	.24	.17
Ability to Purchase Alcohol or Tobacco	.41	.35	.34	.37	.32	.30	.38	.18	.22	.33	.25
Community Domain: Protective Factors											
Community Opportunities for Positive Involvement	NS	-.03	-.02	NS	-.02	NS	-.02	-.06	-.03	NS	-.04
Community Rewards for Positive Involvement	-.08	-.04	-.05	-.06	-.05	-.06	-.06	-.03	NS	-.04	NS
Family Domain: Risk Factors											
Poor Family Supervision	.20	.17	.15	.18	.15	.14	.17	.12	.12	.12	.12
Lack of Parental Sanctions for ASBs	.25	.24	.20	.22	.22	.17	.23	.17	.15	.18	.18
Parental Attitudes Favorable Toward ATOD Use	.32	.28	.27	.35	.32	.26	.31	.14	.17	.25	.17
Exposure to Family ATOD Use	.28	.22	.24	.30	.28	.25	.26	.12	.16	.21	.13
Parental Attitudes Favorable Toward ASB	.28	.26	.18	.25	.22	.17	.23	.17	.23	.20	.17
Family (Sibling) History of ASB	.30	.18	.23	.29	.25	.26	.25	.13	.14	.17	.14
Family Domain: Protective Factors											
Family Attachment	-.18	-.12	-.13	-.14	-.11	-.15	-.13	-.06	-.09	-.08	-.06
Family Opportunities for Prosocial Involvement	-.18	-.12	-.13	-.14	-.11	-.13	-.12	-.05	-.09	-.08	-.07
Family Rewards for Prosocial Involvement	-.18	-.13	-.14	-.15	-.11	-.14	-.15	-.09	-.12	-.10	-.10

(Table continued on next page)

TABLE 15 (continued)
Correlations Between Risk/Protective Factors, Substance Use, and Antisocial Behaviors (ASBs) Prevalence, 2003
(Entries are correlations)

Risk/Protective Factors	Alcohol, Tobacco, and Other Drug (ATOD) Use						Frequency of ASB Occurrence				
	Number of Drugs Used in Lifetime	Number of Drugs Used Past 30 Days	Monthly Cigarette Use	Monthly Alcohol Use	Monthly Marijuana Use	Substance Abuse	Drunk at School	Suspended from School	Attacked Someone	Sold Illegal Drugs	Arrested
School Domain: Risk Factors											
Low School Commitment	.26	.18	.18	.23	.21	.19	.21	.12	.16	.16	.13
Poor Academic Performance	.16	.12	.17	.14	.14	.11	.17	.18	.13	.12	.14
School Domain: Protective Factors											
School Opportunities for Positive Involvement	-.13	-.13	-.09	-.11	-.11	-.07	-.11	-.10	-.09	-.09	-.09
School Rewards for Positive Involvement	-.16	-.10	-.10	-.15	-.12	-.12	-.12	-.03	-.07	-.08	-.05
Peer-Individual Domain: Risk Factors											
Early Initiation of Problem Behaviors	.61	.41	.42	.52	.46	.43	.48	.36	.40	.34	.35
Favorable Attitudes Toward ATOD Use	.50	.38	.43	.50	.45	.43	.45	.18	.23	.32	.23
Low Perceived ATOD Use Risk	.21	.21	.15	.17	.17	.11	.17	.16	.13	.13	.14
Antisocial Behaviors (ASBs)	.48	.46	.34	.39	.46	.35	.75	.55	.68	.73	.68
Favorable Attitudes Toward ASB	.38	.29	.26	.36	.30	.28	.34	.21	.32	.25	.22
Friends' ATOD Use	.48	.30	.37	.46	.38	.39	.40	.19	.25	.27	.23
Interaction with Antisocial Peers	.45	.35	.34	.40	.39	.34	.48	.35	.39	.40	.37
Rewards for Antisocial Involvement	.46	.32	.34	.43	.37	.36	.39	.20	.30	.28	.23
Rebelliousness	.34	.26	.23	.31	.25	.25	.28	.17	.26	.21	.18
Sensation Seeking	.42	.29	.27	.38	.33	.33	.36	.21	.33	.27	.22
Peer-Individual Domain: Protective Factors											
Peer Disapproval of ATOD Use	-.25	-.24	-.18	-.20	-.18	-.14	-.20	-.16	-.17	-.15	-.15
Belief in the Moral Order	-.36	-.25	-.23	-.34	-.28	-.27	-.31	-.17	-.29	-.22	-.17
Educational Aspirations	-.12	-.12	-.13	-.09	-.12	-.07	-.15	-.15	-.13	-.13	-.14
Risk Index	.51	.37	.38	.48	.41	.41	.43	.28	.35	.29	.26
Protective Index	-.24	-.18	-.18	-.20	-.18	-.18	-.19	-.12	-.15	-.13	-.11

NOTES: *ATOD* refers to Alcohol, Tobacco, and Other Drug Use. *ASB* refers to Antisocial Behavior. Only correlations significant at $p < .0001$ are reported in the table. Correlations not significant at $p < .001$ are indicated by NS. See Table 14 for explanation of predictor variables.

TABLE 16
Trends in Problematic Risk and Protective Factors in Hawaii, by County (Place of Residence) and Public School District: Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and *all* indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	County (Public & Private)				Public School District						
	C & C of Honolulu	Hawaii County	Kauai County	Maui County	Honolulu District	Central District	Leeward District	Windward District	Hawaii District	Kauai District	Maui District
Community Domain: Risk Factors											
Community Disorganization	all	'02	'03		all		all	'03	'02	'03	
Transition & Mobility	all	'00, '03		'00		all	all	'00, '02	'03		
Exposure to Community ATOD Use		all	'00, '02	all		'00, '03	all	all	all	'00, '02	all
Laws and Norms Favorable to ATOD Use		all	all	all			all	all	all	all	all
Perceived Availability of Drugs and Handguns		all	'00, '02	'02, '03		'00		all	all	'00, '02	'02, '03
Ability to Purchase Alcohol or Tobacco	'02	all		'03	'02	'00		all	'00, '03		
Community Domain: Protective Factors											
Community Opportunities for Positive Involvement	all				all	all	all	'00			
Community Rewards for Positive Involvement	'00, '02	'03		'03	all	'00, '03	all		'03		'03
Family Domain: Risk Factors											
Poor Family Supervision		all	all	all	'00, '03		'00, '03	'02	all	all	all
Lack of Parental Sanctions for ASBs		all	all	all				all	all	all	all
Parental Attitudes Favorable Toward ATOD Use		all	'00, '02	all				all	all	all	all
Exposure to Family ATOD Use		all	'00, '02	all			'02, '03	'00, '02	all	'00, '02	all
Parental Attitudes Favorable Toward ASB		all	'00, '03	all		'00		all	all	'00	'02, '03
Family (Sibling) History of ASB		all	all	all			'02, '03	all	all	'00, '02	all
Family Domain: Protective Factors											
Family Attachment	all	'03			all	'00, '03	all	'02	'03		'03
Family Opportunities for Prosocial Involvement	all	'03	'02		all	'00, '03	'00, '03		'03	'02	
Family Rewards for Prosocial Involvement	all	'03			all	'00, '03	all	'02	'03		'02

(Table continued on next page)

TABLE 16
Trends in Problematic Risk and Protective Factors in Hawaii, by County (Place of Residence) and Public School District: Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and *all* indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	County (Public & Private)				Public School District						
	C & C of Honolulu	Hawaii County	Kauai County	Maui County	Honolulu District	Central District	Leeward District	Windward District	Hawaii District	Kauai District	Maui District
School Domain: Risk Factors											
Low School Commitment		'00, '02	'00, '02	all		'00, '03	'03	all	all	all	all
Poor Academic Performance	all	'03	'02		all		all	'00, '02	'03	'02	all
School Domain: Protective Factors											
School Opportunities for Positive Involvement		all	all	all	'00, '02	'00, '03	'03	all	all	all	all
School Rewards for Positive Involvement	'03		'02	'00, '02	'00, '02	all	all	'02, '03	all	all	all
Peer-Individual Domain: Risk Factors											
Early Initiation of Problem Behaviors		all	'00, '02	all			all	all	all	all	all
Favorable Attitudes Toward ATOD Use		all	'00, '02	all		'00		all	all	'00, '02	all
Low Perceived ATOD Use Risk		all	'00, '02	all			'02	'02, '03	all	'00, '02	all
Antisocial Behaviors (ASBs)		all	'00, '02	all		'00	all	all	all	'00, '02	all
Favorable Attitudes Toward ASB		all	'00, '02	all		'00, '03		all	all	'00	all
Friends' ATOD Use		all	all	all			'02, '03	all	all	all	all
Interaction with Antisocial Peers		all	'02	all		'00	all	all	all	'02, '03	all
Rewards for Antisocial Involvement		all	'00, '02	all		'00	'02, '03	all	all	'00, '02	all
Rebelliousness		all	'00	'02		'00	all	all	all	'00	'02
Sensation Seeking		all	'00, '02	all		'00		all	all	all	all
Peer-Individual Domain: Protective Factors											
Peer Disapproval of ATOD Use		all	'00, '02	all				all	all	'00, '02	all
Belief in the Moral Order		all	'00, '02	all		all	'03	all	all	'00, '02	all
Educational Aspirations		all	all	all	all	'00	all	'00, '02	all	all	all

NOTES: Dates ('00=2000; '02=2002; '03=2003; all=all three years) indicate risk factors that are higher than or equal to statewide percentages, and protective factors that are lower than or equal to statewide percentages in that particular year. Prevention efforts need to focus on factors that remain or have become problematic in 2003.

TABLE 17
Trends in Problematic Risk and Protective Factors in Hawaii, by Sex and Ethnicity:
Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and *all* indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	Sex		Ethnic Background				
	Male	Female	Chinese	Filipino	Japanese	Hawaiian	White
Community Domain: Risk Factors							
Community Disorganization	all			all		all	
Transition & Mobility		all				all	all
Exposure to Community ATOD Use		all				all	all
Laws and Norms Favorable to ATOD Use	all					all	all
Perceived Availability of Drugs and Handguns	all					'02, '03	all
Ability to Purchase Alcohol or Tobacco	all					all	all
Community Domain: Protective Factors							
Community Opportunities for Positive Involvement	all		all	all			
Community Rewards for Positive Involvement	'02, '03		all	all	'00		'02, '03
Family Domain: Risk Factors							
Poor Family Supervision	all		all	all			
Lack of Parental Sanctions for ASBs	'00, '02	'03		'00		all	all
Parental Attitudes Favorable Toward ATOD Use	'00, '02	'03				all	all
Exposure to Family ATOD Use		all				all	all
Parental Attitudes Favorable Toward ASB	all					all	all
Family (Sibling) History of ASB		all				all	all
Family Domain: Protective Factors							
Family Attachment		all	all	all			
Family Opportunities for Prosocial Involvement	all		all	all	all		
Family Rewards for Prosocial Involvement	all		all	all	'00		

(Table continued on next page)

TABLE 17 (continued)
Trends in Problematic Risk and Protective Factors in Hawaii, by Sex and Ethnicity:
Identification of High Risk Factors and Low Protective Factors in 2000, 2002, and 2003

('00, '02, '03, and *all* indicate year in which risk/protective factor was problematic)

Risk/Protective Factors	Sex		Ethnic Background				
	Male	Female	Chinese	Filipino	Japanese	Hawaiian	White
School Domain: Risk Factors							
Low School Commitment	all				all	'00, '02	all
Poor Academic Performance	all			'00, '02		all	
School Domain: Protective Factors							
School Opportunities for Positive Involvement	all		'03		all		all
School Rewards for Positive Involvement	all		'02, '03		all		all
Peer-Individual Domain: Risk Factors							
Early Initiation of Problem Behaviors	all					all	all
Favorable Attitudes Toward ATOD Use	'00	'02, '03				all	all
Low Perceived ATOD Use Risk	all					all	all
Antisocial Behaviors (ASBs)	all					all	'00, '02
Favorable Attitudes Toward ASB	all					'02	all
Friends' ATOD Use		all		'02		all	all
Interaction with Antisocial Peers	all					all	'00, '02
Rewards for Antisocial Involvement	all					all	all
Rebelliousness	all					all	all
Sensation Seeking	all					all	all
Peer-Individual Domain: Protective Factors							
Peer Disapproval of ATOD Use & ASB	all					all	all
Belief in the Moral Order	all					all	all
Educational Aspirations	all			all		all	

NOTES: Dates ('00=2000; '02=2002; '03=2003; *all*=all three years) indicate risk factors that are higher than or equal to statewide percentages, and protective factors that are lower than or equal to statewide percentages in that particular year. Prevention efforts need to focus on the bolded items which have remained or have become problematic in 2003.

REFERENCES

- Arthur, M. W., Glaser, R. R., & Hawkins, J. D. (2003). Community adoption of science-based prevention programming. In R. D. V. Peters, B. Leadbeater, & R. J. McMahon (Eds.), *Resilience in children, families, and communities: Linking context to practice and policy*. New York: Kluwer Academic/Plenum.
- Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors: The Communities That Care Youth Survey. *Evaluation Review*, 26(6), 575-601.
- Hawkins, J. D., Arthur, M. W., & Catalano, R. F. (1995). Preventing substance abuse. In M. Tonry & D. Farmington (Eds.), *Building a safer society: Strategic approaches to crime prevention. Crime and justice series volume 19* (pp. 343-427). Chicago: Chicago University Press.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 64-105.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G. (2004). *Monitoring the Future national survey results on drug use 1975-2003; Volume 1, secondary school students* (NIH Publication No. 03-5507). Bethesda, MD: National Institute on Drug Abuse.
- Klingle, R. S. (2001). *Ka Leo O Na Keiki ~ The 2000 Hawaii student alcohol, tobacco, and other drug use study (1987-2000); Hawaii adolescent prevention and treatment needs assessment*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.
- Klingle, R. S., & Miller, M. (1997). *Hawaii adolescent treatment needs assessment results from the Hawaii Student Drug Use Study, 1989-1996*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.
- Klingle, R. S., & Miller, M. (1999). *1998 Hawaii student alcohol and drug use study (1991-1998): Hawaii adolescent treatment needs assessment*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.
- Pearson, R. S. (2003). *Ka Leo O Na Keiki ~ The 2002 Hawaii student alcohol, tobacco, and other drug use study (1987-2002); Hawaii adolescent prevention and treatment needs assessment*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.
- Pearson, R. S. (2004). *Ka Leo O Na Keiki ~ The 2003 Hawaii student alcohol, tobacco, and other drug use study (1987-2003); Hawaii adolescent prevention and treatment needs assessment*. Honolulu, HI: Hawaii Department of Health, Alcohol and Drug Abuse Division.
- Woo, A., Yen, R., & Pollard, J. (1994). *Alcohol and other drug use among public school students in Hawaii*. Honolulu, HI.